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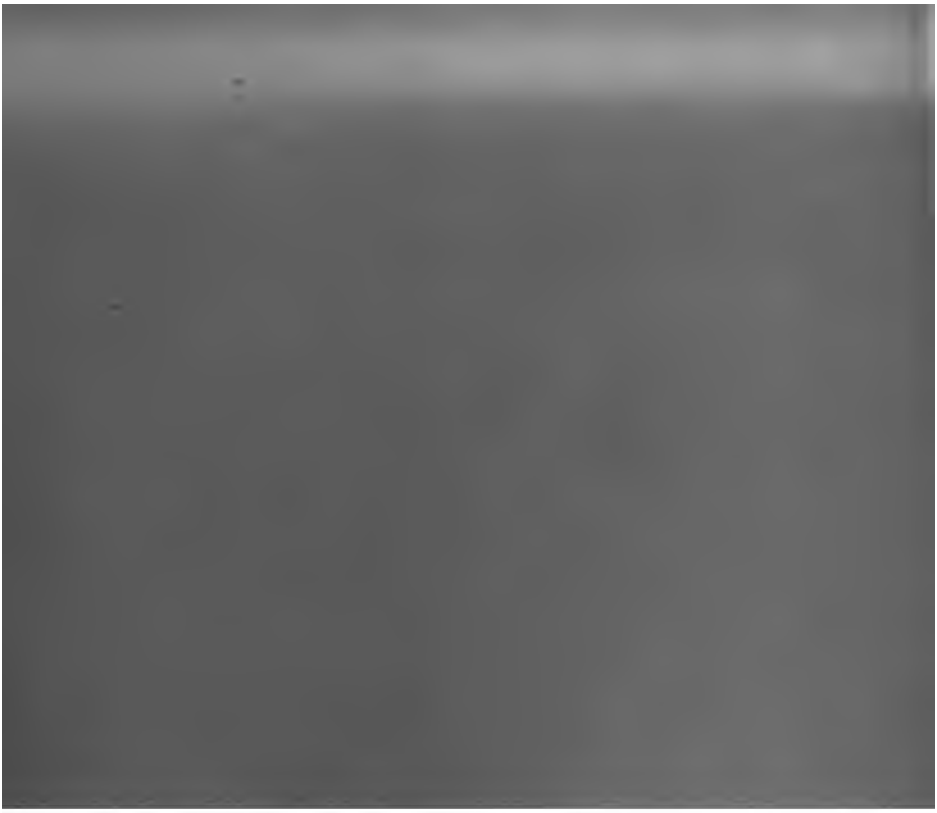

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Johnstone, Sir Harcourt, Bart., M.P.
Jones, T. W. C.

Keating, Sir Henry S.
Kelly, Lord Chief Baron
Kennaway, Sir J. H., Bart., M.P.
Kettle, Rupert A.
Kimberley, Earl of
Kinnaird, Hon. Arthur, M.P.

Lambert, Rev. Brooke
Latham, Baldwin, C.E.
Lawrence, Lord
Lefevre, G. J. Shaw, M.P.
Leighton, Sir Baldwyn, Bart.
Lichfield, Earl of
Lloyd, Sampson S., M.P.
Londesborough, Lord
Longfield, Hon. Montifort, LL.D.
Lowe, Rt. Hon. Robert, M.P.
Ludlow, J. M.
Lyon, J. A.
Lyttelton, Lord
Lyveden, Lord

Macadam, Stevenson, Ph.D., F.R.S.E.
McArthur, Alexander, M.P.
McArthur, William, M.P.
*McClelland, James
Macdonald, Alexander, M.P.
McKenna, Sir Joseph, D.L., M.P.
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Mann, Horace
Marshall, James
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Melly, George
Michael, W. H., F.C.S.
Miller, A. E., Q.C.
Miller, Dalton T.
Minto, Earl of
Moncreiff, Lord
*Monk, C. J., M.P.
Montagu, Lord Robert, M.P.
*Moreton, John
Morley, Samuel, M.P.
Mouat, F. J., M.D., C.B.
Mozley, Herbert N.
Mure, Colonel, M.P.

Napier and Ettrick, Lord, K.T.
Napier, Rt. Hon. Sir Joseph, Bart.
Neaves, Hon. Lord
Neison, F. G. P.
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Oldfield, Colonel
O'Hagan, Lord
O'Malley, E. L.
O'Neill, Hon. Edward, M.P.
O'Reilly, Myles W., M.P.
Overstone, Lord

Pagliardini, Tito
Pankhurst, Richard M., LL.D.
Payne, Joseph
Peel, Rt. Hon. Sir Lawrence, D.C.L.
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Pennington, Frederick, M.P.
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Phené, J. S.
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Pulling, Mr. Serjeant

Ramsay, John, M.P.
Ratcliff, Colonel
Rathbone, P. H.
Rathbone, William, M.P.
Rawlinson, Sir Christopher
Rawlinson, Robert, C.E., C.B.
Read, C. S., M.P.
Richard, Henry, M.P.
Rigg, Rev. J. H., D.D.
Ripley, H. W., M.P.
Ripon, Marquis of
Rosebery, Earl of
Rothschild, Baron Lionel de
Russell, Earl, K.G.
Rutson, A. O.
Ryalls, C. W., LL.D.
Ryalls, L. A.
Ryland, Arthur

Safford, A. H.
Safford, Frank
Shaen, Rev. Richard

Shaen, William
Shaftesbury, Earl of, K.G.
Sheridan, H. B., M.P.
Shrimpton, Charles, M.D.
Sopwith, Thomas, F.R.S.
*Spotton, William
Stanhope, Hon. Edward, M.P.
Steinthal, Rev. S. A.
Stephenson, Rev. Nash
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Stewart, A. P., M.D.
Stuart, C. Parker

Taylor, P. A., M.P.
Taylor, R. W. Cooke
Teignmouth, Lord
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Tufnell, E. Carlton
Twells, Philip, M.P.
Twiss, Sir Travers, Q.C., D.C.L., F.R.S.
Twining, Thomas

Vaughan, James

Waddilove, Alfred, D.C.L
*Walker, John
*Waller J. F., LL.D.
Ware, Martin
*Warrack, John
Waterhouse, Samuel, M.P.
Watson, Sir James
Webster, Thomas, Q.C., F.R.S.
Weguelin, Thomas, M.P.
Westlake, John, Q.C.
White, J. Sewell
*White, Peter
White, Robert
Whitelaw, Alexander, M.P.
Whitwill, Mark
Williams, Arthur J.
Williams, Sir F. Martin, Bart., M.P.
Wilmot, Sir J. E. Eardley, Bart., M.P.
Wright, Warner

Yeats, John, LL.D.

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Carpenter, Alfred, M.D.
Clode, William
Cookson, W. Strickland, *Treasurer*

Dunn, E. C.

Edgar, Andrew, LL.D.

Fortescue, Hon. Dudley

Hamilton, Rowland
Hardwicke, William, M.D.
Hastings, G. Woodyatt, *President of Council*

Hill, Frederic

Jones, T. W. C.

Marshall, James
McClelland, James
Miller, A. E., Q.C.
Mozley, H. N.

Neison, F. G. P.

Ryalls, C. W., LL.D., *General Secretary*

Teulon, Seymour

Westlake, John, Q.C., *Foreign Secretary*
White, Robert

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Monsieur Le Comte J. Arrivabene, Bruxelles.
Marquis D'Avila, Ministre d'Etat de S. M. Très Fidèle, Lisbon.
Monsieur Michel Chevalier, Avenue de l'Impératrice No. 27, Paris.
Monsieur Le Comte Auguste Ciezkoswki, Wierzenica, Grand-Duché de Posen.
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His Excellency Senor Don Arturo de Marcoartu, Madrid, Spain.
Monsieur Le Dr. Neumann, Köpnicker Strasse No. 110a, Berlin.
Edwin Pears, Esq., 2 Rue de la Banque, Constantinople.
Monsieur F. Le Play, Place Saint Sulpice No. 6, Paris.
Monsieur Le Dr. Schubert, Königsberg.
Monsieur W. H. Suringar, Président de Mettray, Amsterdam.
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Monsieur Le Dr. Varrentrapp, Francfort-sur-Main.
Monsieur A. Visschers, Conseiller au Conseil des Mines, Rue Royale No. 106, Bruxelles.
Count Zamoyski, Cracow, Russia.

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Mrs. John Knox, London.
Miss Mary Carpenter, Bristol.

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The Right Hon. EARL OF SHAFTESBURY, K.G.
The Right Hon. EARL DUFFERIN AND CLANDEBOYE, K.G.
The Right Hon. EARL OF CARNARVON.
The Right Hon. Sir STAFFORD NORTHCOTE, Bart, C.B., M.P.
His Grace THE DUKE OF NORTHUMBERLAND.
The Right Hon. LORD HAMPTON, G.C.B.
The Right Hon. LORD NAPIER AND ETTRICK, K.T.
The Right Hon. LORD HOUGHTON, D.C.L., F.R.S.

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II. The Right Hon. LORD NAPIER AND ETTRICK, K.T.
III. The Right Hon. LYON PLAYFAIR, D.C.L., C.B., M.P.
IV. Sir GEORGE CAMPBELL, D.C.L., K.C.S.I.

President of the Council.

GEORGE WOODYATT HASTINGS.

General Secretary.

CHARLES WAGER RYALLS, LL.D.

Foreign Secretary.

JOHN WESTLAKE, Q.C.

Secretaries of Departments.

I. H. N. MOZLEY. | T. W. C. JONES.
II. Rev. BROOKE LAMBERT. | ROWLAND HAMILTON.
III. WILLIAM CLODE. | WILLIAM HARDWICKE, M.D.
BALDWIN LATHAM, C.E.
IV. F. G. NEISON. | E. L. O'MALLEY.
Rev. S. A. STEINTHAL.

Treasurer.

W. STRICKLAND COOKSON.

Auditors.

FRANCIS FULLER. | A. V. NEWTON.

Assistant Secretary.

JAMES ROBINSON.

Bankers.

THE LONDON AND WESTMINSTER BANK, 1 St. James's Square, S.W.
Messrs. RANSOM, BOUVERIE & Co., 1 Pall Mall East, S.W.

Office of the Association.

1 ADAM STREET, ADELPHI, LONDON, W.C.

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His Grace the Duke of Hamilton.
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The Right Hon. the Earl of Glasgow.
The Right Hon. the Earl of Home.
The Right Hon. the Earl of Minto.
The Right Hon. the Earl of Rosslyn.
The Right Hon. Lord Lawrence.
The Right Hon. the Lord Advocate.
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Sir Michael Shaw Stewart, Bart., Lord-Lieutenant of Renfrewshire.
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The Hon. Charles Hanbury Lennox.
Sir James Campbell.
Sir Peter Coats.
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The Deacon-Convener.
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James White. John Matheson, Jun.—*Vice-Chairmen.*

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James Bryce, LL.D., F.G.S.
John Burns.
James Alexander Campbell, LL.D.
Michael Connal.
R. S. Cunliff.
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A. B. M'Grigor.
A. G. Macdonald.
J. D. Marwick.
R. T. Middleton.
James R. Napier, F.R.S.
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John Ure.
Bailie Walls.

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Thomas Balmain, British Linen Bank

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Professor Gairdner, M.D.
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Economy and Trade.—Hugh Brown. T. G. Wright. George Jackson.

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Chairman.

GEORGE WOODYATT HASTINGS.

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The Hon. Lord CRAIGHILL.
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The Hon. EDWARD STANHOPE, M.P.

LAWS OF THE ASSOCIATION.

Object and Organisation.

I. The object of the Association is to aid the development of Social Science.

II. The Association comprises four Departments: the first, for Jurisprudence and Amendment of the Law; the second, for Education; the third, for Health; and the fourth, for Economy and Trade.

III. The Association consists of Ordinary Members, Corporate Members, Foreign Corresponding Members, and Associates.

Terms of Membership.

IV. Any person who pays an Annual Subscription of One Guinea, or a Life Subscription of Ten Guineas, to the Funds of the Association, is an Ordinary Member.

V. Any Public Body paying to the Funds of the Association an Annual Subscription of Two Guineas, is a Corporate Member.

VI. Foreign Corresponding Members are elected by the Council, the number of such Members being limited by Bye-Law. Foreign Corresponding Members are exempt from payment.

VII. Any person who pays Ten Shillings to the Funds of the Association is an Associate for the Annual Meeting for which such payment is made.

VIII. The Annual Subscription is payable in advance on the first day of August in each year.

Officers and Government.

IX. The Association has a President, Vice-Presidents, Presidents and Vice-Presidents of Departments, a President of Council, a General Secretary, a Treasurer or Treasurers, Foreign Secretary, and Secretaries of Departments, who are all annually elected, and hold office until the appointments of the following year are made.

X. The Association is governed by a Council, and by an Executive Committee, subject to the directions of the Council.

XI. The Council consists of the following persons:—

1. The President, Vice-Presidents, Presidents and Vice-Presidents of Departments, General Secretary, Treasurers, Foreign Secretary, and Secretaries of Departments.

2. Every Member who has filled the office of President or President of a Department, or who has filled for three years the office of General Secretary, Treasurer, Foreign Secretary, or Secretary of Department.

3. Every Member who, up to the 31st of July, 1862, had served for three years as a Member of Council.

4. Every Member of either House of Parliament who is also a Member of the Association.

5. Such Members, not exceeding fifteen in each Department, as shall be annually nominated by the Standing Committee of each Department.

6. Such Representatives of any Branch or Local Association, not exceeding two, as may be nominated from time to time by such Branch or Local Association.

7. Such Representative of any Society existing in connection with the Association as may be nominated from time to time by such Society.

8. Such Representative of any Learned Society, or Chamber of Commerce, being a Corporate Member of the Association, as may from time to time be nominated by such Corporate Member.

9. Such Members as may be nominated by the Association, on the recommendation of the Council, for special services to the Association.

10. Such Members, not exceeding twelve, as shall be annually nominated by the Council, on the recommendation of the Executive Committee.

XII. The Executive Committee consists of the President of Council, the General Secretary, the Treasurer, the Foreign Secretary, one Secretary from each Department nominated by the Council, and Twelve Members elected annually by the Council.

XIII. The Council meets at the time of the Annual Meeting of the Association, at three other times during the year, and also when specially summoned by the Executive Committee.

Annual and other Meetings.

XIV. An Annual Meeting for the reception of the Address of the President, and of the Reports of the Council and Standing Committees, and for the reading and discussion of Papers, is held in such place, and at such time, as may be appointed by the Council.

XV. A Business Meeting of the Members is held in each year at the office of the Association, at such time as may be appointed by the Council, to receive a Report from the Council on the financial and other business of the Association, to elect the Officers and Standing Committees for the ensuing year, and to enact such Laws as may from time to time be required.

XVI. The Council has the power of summoning a General Meeting of Members, on fourteen days' notice, for such purpose, and at such time and place, as it thinks fit.

XVII. The General Secretary, on receiving a requisition signed by twenty Members, summons, at such time, being within thirty days, and at such place as he thinks fit, a General Meeting of the Members, for the purposes stated in such requisition.

XVIII. Special Meetings are held in London, under the regulation of the Executive Committee, for reading Papers, and for discussion, on specific questions.

Rights and Privileges of Members.

XIX. Every Ordinary Member has the right of attending and voting at the Annual Meeting, the Business Meeting of Members, and all other General Meetings of the Association, of being eligible to any of its offices, and of receiving gratuitously its *Transactions.*

XX. Any Ordinary Member, whose name has been submitted for that purpose to, and approved by, the Executive Committee, and who pays an additional annual subscription of One Guinea, or an additional life subscription of Ten Guineas, has the privileges of attending and voting at the Special Meetings mentioned in Law XVIII., of receiving all publications issued in connection with such

Meetings, and of the using of the Library at the office of the Association.

XXI. Every Corporate Member receives gratuitously a copy of the *Transactions*, and may nominate two Representatives to attend the Meetings of the Association.

XXII. Every Foreign Corresponding Member has all the rights of an Ordinary Member, except that of eligibility to the Council.

XXIII. Every Associate has the right of attending and voting at the Annual Meeting, held by Law XIV.

Standing and other Committees.

XXIV. A Standing Committee for each Department is annually elected at the Business Meeting of Members. A Standing Committee has the power to appoint Sub-committees.

XXV. Special Committees are appointed by the Association or by the Council, to consider and report on specific subjects of reference.

XXVI. The President of Council is, *ex officio*, a Member of every Standing Committee, and the General Secretary and the Foreign Secretary are, *ex officio*, Members of every Committee and Sub-committee. The Secretary of each Department is, *ex officio*, a Member of every Committee and Sub-committee of such Department.

Constitution and Conduct of Meetings.

XXVII. For General Meetings of the Association twenty Members, for Meetings of the Council seven Members, for those of the Executive Committee five Members, and for those of other Committees and Sub-committees three Members, form a quorum.

XXVIII. At all the aforesaid Meetings the Chairman has a vote; if the votes be equal he has also a casting vote.

XXIX. No original motion, of which previous notice has not been given, is put from the Chair at any Meeting of the Association held under Laws XIV., XV., or XVI.

Finances.

XXX. The funds of the Association are kept in its name at a Bank. All sums received on account of the Association are paid

into the Bank; and all cheques on the Bank are drawn by order of the Council or of the Executive Committee, signed by the Treasurer, and countersigned by the General Secretary.

XXXI. At the Business Meeting of Members two Auditors, not being Members of the Executive Committee, are appointed on motion, by show of hands, to audit the accounts of the ensuing year.

XXXII. The accounts of the Association are made up to the end of June in each year; and, after being duly audited, are appended to the Annual Report of the Council.

Vacancies in Offices.

XXXIII. The Council fills up any vacancy occurring during the year in any of the offices named in Law IX.

RECEIPT AND PAYMENT ACCOUNT.

For the year ending June 30th, 1874.

RECEIPTS.

			£	s.	d.
1873.					
July 1.	By Balance:				
	London and Westminster Bank:				
	Deposit Account	100 0 0			
	Current do.	16 2 6			
	Ransom & Co.	5 5 0			
	Petty Cash	0 6 5			
			121	13	11
1874.					
June 30.	„ Subscriptions received at Office and at Bankers'		989	2	0
	„ Norwich Congress, Sale of Tickets ...		501	18	0
	„ *Transactions* and Publications sold, &c. ...		94	16	5
	„ Rent of Rooms		68	10	0
			£1,776	0	4

*** At the end of the financial year the only liability was £175 13*s.* 6*d.* for Printing, against which there is a Balance in hand of £255 14*s.* 5*d.*, and some trifling debts owing.

PAYMENTS.

			£	s.	d.
1874.					
June 30.	To Printing *Transactions* of 1873, and Indexing		107	15	0
	„ Rent and Gas		204	6	10
	„ Secretary and Salaries		392	10	0
	„ Wages		100	10	6
	„ Office Expenses		105	13	5
	„ Library—Books, &c.		39	1	6
	„ Printing:—				
	General Account ...	127 14 0			
	Sessional do. ...	109 2 3			
			236	16	3
	„ Stationery		17	1	11
	„ *Transactions*, Delivery		29	8	0
	„ Postage		81	15	0
	„ Travelling Expenses		73	14	0
	„ Reporting Proceedings		86	10	6
	„ Collector's Commission, &c.		38	17	0
	„ Subscriptions returned		6	6	0
	„ Balance:—				
	London and Westminster Bank:—				
	Deposit Account ...	100 0 0			
	Current do. ...	150 5 11			
	Ransom & Co. ...	5 5 0			
	Petty Cash	0 3 6			
			255	14	5
			£1,776	0	4

Examined and found correct.
August 6th, 1874.

F. FULLER,
A. V. NEWTON, } AUDITORS.

ODD FELLOWS' LIBRARY ASS. SAN FRANCISCO, CAL.

INTRODUCTION.

THE Eighteenth Annual Congress of the Association was held at Glasgow, commencing on Wednesday, September 30th, and terminating on Wednesday, October 7th, 1874, this being the second occasion of the Association meeting in that city, the Congress having been held there in 1860. The proceedings of the Congress were opened by a large meeting of members in the City Hall, when the retiring President, the Right Honourable the Lord Houghton, briefly addressed the assembly, congratulating them on their choice and good fortune in his successor as President of the Association, the Right Honourable the Earl of Rosebery, whom he introduced to the meeting, and to whom he resigned the chair. The Earl of Rosebery having taken the chair, proceeded to deliver his inaugural address, which was listened to with great attention, and in many parts loudly applauded.

On the evening of Friday, October 2nd, the usual Working Men's Meeting in connection with the Congress was held in the City Hall, which was crowded in every part, the tickets of admission having been disposed of by the local committee to working-men at sixpence each. The meeting was presided over by the Honourable the Lord Provost, who called first upon the Earl of Shaftesbury, a former President of the Association, to address the meeting. The Earl of Shaftesbury, who was received with loud and long-continued cheering, and who spoke at considerable length, referred to the vital importance of co-operation both in production and distribution, alluding to the

admirable and uncontroversial way in which this question was handled in the writings of Mr. Brassey, and deprecated strikes as calculated to lead to the ruin of both parties concerned. The noble earl next alluded to the importance of sanitary arrangements and education, asserting the necessity of sanitary arrangements preceding all attempts at education, and that attention to sanitary matters in the houses of the working classes would lead to a desire for education, including in the term 'sanitary matters' all that would maintain or injure health and that tended to preserve life and action, and therefore including a decent and comfortable dwelling and the proper cooking and preparation of food. He also urged the necessity for the working class communicating together, and assisting to create a healthy public opinion on such questions as these. He next referred to education, asserting his assurance of education giving a right purpose and true dignity to labour. He next referred to the evils of intemperance amongst the working classes, and described, as the result of temperance and thrift, the workingmen's dwellings on the Shaftesbury Park Estate at Battersea, which were being gradually purchased by the occupiers, who would not allow a single public-house to exist on the estate. The noble earl concluded his speech with an allusion to his sympathies with the working classes during a life of three score and fourteen years, a fact which rendered it probable that his speech on that night would be a last farewell. The Right Honourable Lyon Playfair, M.P., was next called on, and spoke of the health of every man affecting that of his neighbour, stating that the citizens of Glasgow died as fast as those of Calcutta and Bombay; that among the middle and well-to-do classes of this country the annual rate of mortality was about 10½ per 1,000, while amongst the working classes of Glasgow it was nearly three times as much; that Scotland shared this excess; and that whilst England and Ireland were yearly improving, Scotland was year by year becoming worse. In the whole kingdom, 150,000 annually died who ought not to die,

and four and a half millions of people were grievously sick who ought not to be sick. Cleanliness was the true remedy for this state of things. In Glasgow, one of the greatest evils was overcrowding. He also alluded to the necessity for sound secondary and technical education, to render working-men something more than mere machines. Lord Moncreiff referred to the sense with which he was impressed of progress since the Association met in Glasgow fourteen years before. Speaking of the work of the Association, he said that although the Association might do much to stimulate and even instruct, yet social science could only be thoroughly carried out by the working-men themselves becoming its apostles among their own ranks; and although there were some things which the Government ought to do, such as education, yet even with regard to this, social improvement must begin at home. Sir George Campbell expressed his opinion that if the working-men of this country did obtain good technical education, that they would hold their own against all the world. He advised them to save something, because no man who lived from hand to mouth could ever be thoroughly independent. He also said that working-men would, if possessed of property, be in a better position to make a fair bargain, and would be able to dispense with strikes. He commended trades unions, but advised them not to place the skilful and the unskilful on the same level, and not to restrain one man from doing more work than another. Lord Houghton said that there was a something more necessary for men than pure air and pure water, viz., the character of the individual man, a something which would enable them to do their duty, rise above the class of society in which they lived, and enjoy all the capacities of happiness within their range. That Scotland had distinguished itself for its individual character, and that as Scotland in past ages had invaded England with armed men, so since both England and Scotland had come under the same rule, the invasion had only varied in character, and now the raids of the Scotch on the English were raids of Scotch shrewdness and

intelligence influencing all the practical departments of English life. His lordship touchingly alluded, as an instance of the product of rare Scotch intelligence united with Scotch education, to the young Scotch poet Gray, whom he knew well, on whose grave he stood only that afternoon—a common weaver boy of the neighbouring village of Merkland, who had been able to come to Glasgow University, and who died at the age of 23, leaving poems which would be read by the most intellectual men of Scotland, and songs which would be sung by Scotchwomen as long as the language lasted. He urged them, in conclusion, to use their individual intelligence so as to secure individual independence, and to enable them to resist *slavery* to democratic combination. The Earl of Rosebery, who was loudly called for and most enthusiastically cheered, came forward, and said that he had entered into a solemn compact with the Lord Provost to be allowed to be a mere listener on that occasion, but that he would endeavour to say what he had intended to say if the compact he had mentioned had not been entered into. He thought that Lord Houghton seemed to dread what we ought never to dread so long as education existed—the power and force of the people. He should always think that while we were a great, we were an unsympathetic nation. We knew too little of each other; the extremes of the social scale were not sufficiently acquainted; we were not sociable in ourselves. If two Englishmen were placed in durance vile in the Cannibal Islands, they would proceed to the banquet in silence, and be dressed for the food of their captor rather than utter a single word to each other if they had not previously been introduced. They all had heard the stories which told them how good fairies moved them from their condition of life into another, and they remembered how charming it was when they went to bed a beggar, and woke a cardinal, a caliph, or a king. He sometimes wished that these fairy stories could be realised now; and if those in one condition of life could realise the difficulties of those in other conditions of life,

they would then appreciate the sufferings and toils which were incidental even to pleasure and to luxury, but which were not sufficiently appreciated by all classes. It was so very hard for the rich to be honest to their convictions; it was so hard for the poor to be just. They should remember that it was a good world for the rich, but not always easy for the poor; and if men did so, they would sometimes do more justice to the difficulties which those in other circumstances experienced when they endeavoured to legislate for the humbler classes of society. They could not by any legislation extinguish disease, or crime, or death; but by common sympathies, by greater mutual understandings, they could march hand in hand and heart in heart to that valley they must all tread. Mr. George Anderson, M.P., amidst loud cheers, moved 'That this meeting offers a hearty welcome to the National Association for the Promotion of Social Science, and desires to express its entire sympathy with the objects it is intended to promote.' The motion was seconded by Mr. William Govan, a letterpress printer, and carried with acclamation.

The discussions of the various subjects were interesting, and the departments were well attended. A summary of the business transacted will be found in the Report of the concluding meeting.[1]

An exhibition of Sanitary and Educational Appliances, similar to that held at Leeds in 1871, and Norwich in 1873, was held in the Drill Hall, Burnbank, Glasgow, during the Congress. A much larger collection than any heretofore was brought together, and the display was exceedingly attractive, but mainly to those peculiarly interested in social and sanitary science. The Lord Provost honoured the occasion of the opening with his presence, and delivered an address.[2] A Committee of Examiners was appointed for the purpose of calling attention to its more prominent features, and pointing out

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[1] See Appendix A, p. 953. [2] See p. 962.

those objects which appear to exhibit progress in sanitary science. The Committee expressed their opinion that the exhibition of sanitary and educational apparatus is important in furtherance of the objects of the Association.

During the last Session there were seventeen Evening Meetings held, at which papers on various interesting subjects were read and discussed, besides four Day Conferences. The Session of 1874–5 commenced on November 16th, with the reading of a paper by Mr. Thomas Hare, 'On the Construction of a Municipality for the Metropolis.' An interesting discussion followed, which was twice adjourned. Among other subjects the following Bills have been fully discussed:—The 'Friendly Societies' Bill,' the 'Artizans' and Labourers' Dwellings Bill,' and the 'Adulteration of Food and Drugs Bill.' They have also been considered in Committee. These are questions with which the Association has dealt more or less at its Annual Congresses for several years past. The Fourth Annual Central Conference of Chairmen and Vice-Chairmen of Boards of Guardians, was held under the presidency of the Earl of Fortescue, to discuss subjects relating to the administration of relief generally, and the public health in connection therewith. Since 1868 local conferences of Guardians have been held in various parts of England and Wales. Year by year, owing to the indefatigable labours of Mr. Barwick Baker, of Hardwicke Court, Gloucester, they have been steadily increasing in number, and this year they have assumed a more organised form than heretofore. The object of these conferences, and particularly the one held in London under the auspices of this Association, is to ascertain how Poor Law Administration may be most efficiently carried on without subjecting it to the hard and binding rules of centralisation. In other words, how the freedom of each locality to adapt itself to special circumstances can be made compatible with such an unanimity of principle as will render the work more effectual. The principal subject dwelt upon was the Law of

Settlement, and at the conclusion of the discussion the meeting was of opinion that the time has now arrived at which the Law of Settlement in England and Wales may, with advantage to the community, be entirely abrogated, leaving the question of the treatment of vagrant paupers to be separately dealt with; and it expressed a hope that the Council of this Association will take the matter into consideration, with a view to such action as may be thought advisable. The question has been referred by the Council to the consideration of the Economy and Trade Committee.

The papers and discussions of the evening meetings will be found in the *Journal of Sessional Proceedings*, to which all members paying the full subscription of two guineas annually, are entitled.

A deputation from the Council waited upon the Earl of Carnarvon at the Colonial Office, and another on the Earl of Derby at the Foreign Office, to present memorials urging the necessity of providing better securities for the property of British subjects in intellectual labour in foreign countries than at present exists. The subject was brought before the Association at the opening of last Session by Mr. Thomas Webster, Q.C., F.R.S. Mr. Edward Jenkins, M.P., who has given much attention to the subject, introduced the deputations, and stated in detail the grievances to which British authors and publishers were liable. The two noble lords assured the deputations that their representations should have attention. The subject has been brought before the House of Commons this Session.

The Committee of the Law Amendment Society considered the expediency of providing for local registration of title under the Transfer of Land Bill, and presented a petition to the House of Commons in favour of the establishment in different parts of the country of offices for the economic and expeditious dispatch of business, and otherwise for the convenience of persons desirous of registering titles.

A deputation waited on the Secretary of State for the Home Department to ask for the appointment of a Royal Commission to inquire into the management and discipline of County and Borough Prisons in Great Britain. The application was based upon three grounds, namely, the want of uniformity in discipline and management, the smallness of the average daily number of prisoners in many of the gaols, which rendered it impossible to conduct any system efficiently, and the third, the question of how far the industrial labour in prisons may be extended, and whether it may not partly be substituted for penal labour. The deputation was introduced by Lord Hampton, and Mr. G. W. Hastings minutely stated the object of the deputation. The Home Secretary thought it a matter of considerable importance, and decidedly one, he said, that must be early inquired into in one shape or another.

A deputation from the Special Committee appointed at the Leeds Congress, to promote some memorial to the late Lord Brougham, waited on Her Majesty's Chief Commissioner of Public Works and Buildings, with a view to select a site in or near Westminster Hall for a statue. Various spots likely to afford an eligible site were viewed. The First Commissioner was inclined to St. Stephen's Green, but it was arranged that the subject should be brought before his lordship on some future occasion.

The Standing Committee of the Education Department have had their attention drawn to the working of the Elementary Education Act in towns and rural districts. Many active members of School Boards are desirous of comparing their experiences with others similarly occupied in different parts of the country, especially as to the working of the permissive powers given under the Act of 1870. This having been reported to the Council, that body has been induced to offer its services as a means of intercommunication between all who are concerned in the work of Primary Education, and have appointed a special Committee for the purpose of comparing experience as

to the working of the Elementary Education and other Acts. The Committee has agreed to hold a Conference of Members of School Boards, Head Teachers, and others interested in primary education, on May 6th, for the consideration of such practical questions as may be framed for that purpose.

The Standing Committee on Education had under its consideration the Endowed Schools Act Amendment Bill. In the opinion of the Committee the Bill was open to grave objections both on educational and religious grounds, and a series of resolutions deprecating the proposed alterations were placed in the hands of the Right Hon. Lyon Playfair, to deal with as he thought proper in the House of Commons.

An effort has been made during the past year to obtain an amalgamation of the Local Examinations of the Universities of Oxford and Cambridge. For this purpose a meeting was held in London of delegates from a large number of centres of examination in England and Wales, and a memorial to the University authorities was prepared and agreed on. The Committee who were charged by the meeting with the care of this memorial requested the Council of the Association to lend their support to the work, and at the Glasgow Congress Mr. Hastings was empowered to communicate with the Committee, and to render them any aid he might find to be desirable. The Universities have since expressed in each case their unwillingness to waive their individual action; but the subject will not be allowed to drop, and it is probable that Mr. Barclay Phillips, the Chairman of the Committee above alluded to, will bring it before the Brighton Congress for further discussion.

The Council memorialised the Local Government Board as to the advantage of procuring and publishing periodically an analysis of the air and drinking-water of large towns having a high density of population, and urging that the knowledge of ascertaining the relative constituents of air and water would assist very materially in detecting disease, and thereby suggest-

ing what may be needful for the protection of public health, and for the prevention of the spread of contagious diseases.

A deputation from the Council waited upon the President of the Board of Trade to urge upon him the necessity of adopting some system of medical registration and legal inquiry into the cause of deaths at sea, with a view to diminish the present high rate of mortality in the mercantile marine. The subject had been considered by the Standing Committee of the Health Department, who recommended that some representation should be made to the Government to secure, if possible, medical registration and legal inquiry by a coroner into the cause of deaths upon the high seas, and the prosecution of persons suspected of criminal conduct.

A memorial was presented to the Secretary of State for the Home Department on the propriety of abolishing private slaughter-houses in the metropolis. The 55th section of the Metropolis Building Act of 1844, for the regulation, construction and use of buildings expiring in August, it was thought desirable that some efforts should be made to prevent the repeal of the section so far as related to private slaughter-houses and to make provision by extending the time of operation of the clause in the Act for the necessary steps to be taken for the erection of abattoirs or public slaughter-houses as a substitute for the old system.

A joint deputation of this Association and the Statistical Society waited upon the President of the Local Government Board, to urge on him certain amendments to the Bill then before Parliament to amend the law relating to registration of births and deaths in England. The object of the Registration Acts is to record accurately certain particulars respecting every birth and death in the country, and to keep up a perpetual register of the people. It was urged that the Bill was defective in the following respects:—the time allowed to elapse before information is given, of no proper safeguard against the

burial of live-born children for still-born, and for statistical purposes, by allowing too long time for registration.

The subject of Local Taxation and Government was considered by a Special Committee, who have reported that the questions involved affect many various and complicated interests. Different propositions regarding them were discussed at much length, and from many points of view. The conclusions arrived at by the Committee have been influenced solely by considerations of administrative advantage, and do not enter upon any question of alleged injustice to the landed interest, or the right of the State to the disposal of long-established taxes, subject to which land has been bought, leased, or inherited.

The amount of 300*l.* offered, through the Council of this Association, by his Excellency Senor Don Arturo de Marcartu, ex-deputy to the Cortes in Spain, for the best Essay on the question, 'In what way ought an International Assembly to be constituted for the Formation of a Code of Public International Law; and what ought to be the leading principles on which such a code should be framed?' has been divided, in pursuance of the terms of competition, into two prizes, the first of which, 200*l.*, has been awarded to A. P. Sprague, of Troy, State of New York; and the second prize, 100*l.*, to Paul Larcombe, of Lauzerte (Marne et Garonne), France.

The Council have appointed a Special Committee to consider the draft outlines of an International Code of Law, prepared by Mr. David Dudley Field, of New York, to examine, and revise, and adopt, with additions if necessary, with a view to the formation of a complete code.

The Standing Committees of Departments have had various subjects under their consideration.

The Council have elected Mr. Edwin Pears, of Constantinople, formerly General Secretary of the Association, a Foreign Corresponding Member of the Association.

The Council regard with much satisfaction the kindly feel-

ing displayed towards it by the American Social Science Association, at Boston, United States. At the Norwich Congress that Association was represented by Mr. Hamilton A. Hill, a much esteemed member. Since then the Council has been informed by Mr. J. M. Barnard, the director, that Mr. Hill had expressed his great satisfaction with the meeting, and the various kindnesses he had received from its members. The Council is much indebted to the Association for the present of a number of books and publications on social subjects connected with the Government of the United States, and also for two very able and valuable papers transmitted by the Association to the Glasgow Congress, one on 'The Health of American Cities,' by Dr. Elisha Harris, Secretary to the American Public Health Association, and Registrar of Vital Statistics of New York; and the other on 'Poor Law and Public Charities in America,' by F. B. Sanborn, Secretary to the Boston Association, both of which are printed at length in this volume.

The Council have to record with regret the deaths, during the past year, of three former Presidents of Departments, namely, Sir William Fairbairn, Bart., who presided over the Health Department at the London Meeting; Dr. Lankester, F.R.S., who held a similar post at Sheffield; and the Rev. Canon Kingsley, president of the Education Department at Bristol. The following also are among the deceased members of the last twelvemonth:—Sir W. H. Bodkin, Q.C.; Samuel Brown, F.S.S.; the Marquis of Clanricarde; E. G. Davenport, M.P.; John Laird, M.P.; Caleb Lawden, of Birmingham; J. G. Marshall, of Leeds; Sir Richard Musgrave, of Co. Waterford; J. C. Richardson, of Swansea; the Rev. Canon Richson, of Manchester; Sir Ronald Martin, M.D., C.B.; F. P. O'Malley, Q.C.; Robert Reid, M.P.; Joshua Satterfield, of Manchester; H. L. Tennant, of Greenock; Edward Webster, of London.

The next Annual Congress will be held at Brighton, com-

mencing on October 6, 1875, and the Congress for 1876 will take place at Liverpool.

I regret that the *Transactions* are somewhat later in publication this year than usual. There are several reasons for this, one of which is the greater amount of matter than usual, and another is the necessity of sending to America some of the proof sheets for correction.

I have only in conclusion to express my most sincere thanks for the constant and cordial assistance which I have in the past year received from my able coadjutors, the Honorary Secretaries of Departments.

C. W. Ryalls.

GOOD FELLOWS' LIBRARY ASSOCIATION. SAN FRANCISCO, CAL.

Opening Address

BY THE

RIGHT HONOURABLE THE EARL OF ROSEBERY,

PRESIDENT OF THE ASSOCIATION.

IF, in addressing this great meeting, I were to speak out of the fulness of my heart, I should tell of nothing but my own misgivings. But it is too much the practice on these occasions to take up time almost selfishly in apologies. You asked me kindly and generously to come here to-night: I thought it a clear duty to obey your summons and reciprocate your sympathy. But none the less sensible am I of my own deficiencies and my need of your farther large indulgence; none the less do I feel as if I were only placed in this prominent position to serve as a foil to the ripe wisdom of so many in this Congress. It is impossible for any one at my age to pretend to instruct; few can have adequate knowledge, none sufficient experience. I can offer then no fresh contribution to your stock of information; I can only, as it were, set in motion my small share of the electric current of sympathy and interest which is surely not the least valuable of the features of this Congress. But I would before all express my pride and my joy at making this first visit to Glasgow under the auspices of your Association. There are probably few places to which an Englishman can point with more pride than to Glasgow, none perhaps which a Scotchman can regard with so much. I suppose that there are in this city over five hundred thousand inhabitants, that her rental amounts to two millions and a half, that the shipbuilding of the Clyde is supreme in the world. How long has it taken to produce this immense result? What is the origin of this great population? Whence dates this easy predominance in shipping, this vast collection of material wealth? Two centuries ago Glasgow was officially described as 'a very neat burghe town, consisting of foure streets.' At that time she possessed twelve vessels, carrying 957 tons. In the year 1718, little more than a century and a half ago, the first Scottish ship which ever crossed the Atlantic—a vessel of sixty

tons—was launched in the Clyde, which has since witnessed the building of the Cunard line of steamers. And as for her rental of two millions and a quarter, it has been computed that the rental of the whole of Scotland did not, a century ago, exceed one million sterling. We could not indeed have chosen a more suggestive scene for our Congress, or one where social science should be more dear. For here we have a great material result rapidly produced by the exertions of a vast labouring population; and no one surely in considering this Congress and its functions (as to which indeed I should wish to say a word presently), can avoid seeing that the most vital and perpetual question before it is the well-being of our working classes; a vital question, because on the apt solution of it depends the commercial supremacy, the political solidarity, nay, the very existence of empire. To my mind, a body like ours has no more direct or important duties than the attempt to raise the condition of the nation by means which Parliament is either unable or disdains to apply. Here we have an illimitable field of operations. Parliament can give a workman a vote, but it cannot give him a comfortable home. Nor can it sift and exhibit the many contrivances which may be placed before him of bettering himself, of increasing his capacities and enlarging his enjoyments. All this lies within our province, and it is work incalculably more important than the great mass of our parliamentary legislation. In this city we are surrounded by a great aggregation of humanity—seething, labouring, begrimed humanity; children of toil who have made Glasgow what she is, and alone can raise and maintain her; not mere machines of production, but vehicles of intelligence, mixed in nationality and various in opinion. You cannot appeal to them by common feelings or uniform interests. They are there a dark and mighty power like the cyclopean inmates of Ætna. I must honestly avow my conviction, though to those who see how many there are who profess to represent and understand the working classes it may seem rash, while to others it will seem a truism, that this vast labouring population of ours has not made itself, its wants, its creeds, and its interests sufficiently intelligible to many of us. How, indeed, if it be otherwise, is it, that the problems connected with their condition have advanced so little towards solution? How is it, otherwise, that each political party claims with equal certainty, and on every point, to possess the sympathy and the confidence of the working man? How else is it that when the working class makes its voice heard on any question, it comes upon us like thunder in a clear sky? I

avow myself no exception to the rule; but for that very reason, perhaps, I can conceive no subjects more interesting than those which relate to the welfare of our labouring population. Perhaps, then, you will allow me to disregard the ordinary precedent upon these occasions. The opening address of this Congress has commonly surveyed the present position of those questions with which your Society is accustomed to deal, or which it watches with interest. But speaking, as I do, in the presence of so many who in the various sections will discuss such subjects with the ripe authority of knowledge and experience, I should feel it presumptuous in me to poise a light sentence or hazard a shallow conjecture, where my hearers can for themselves sound the very depth and, perhaps, approximate solution. I will therefore, if you please, attempt to-night to take stock, in some degree, of the various means by which it is sought to raise the condition of the working classes; a group of subjects some of which appear under different divisions in your programme, but which are intimately, I had almost said solemnly, connected together: and I would do so rather as a sign of humble interest in them, than with the slightest pretension of having anything original to advance.

The moment is as suitable as the place for the discussion of these vital and national questions. In times such as these, of high wage, of general peace, of immunity from furious political discord, the well-being of the labouring classes often appears secured, and does not always attract the attention of statesmen. It is, however, precisely then that it is possible to take measures which without exciting jealousy on one hand and suspicion on the other may secure that well-being in less prosperous times. It is then that even the Greeks may innocently bring gifts. But should there come a European war such as we weathered successfully at the beginning of the century, but which left us surrounded for the most part with battered wrecks and with stranded hulls, we might possibly find our teeming population, confined within so small an ark, a perilous and disheartening agency. Moreover, while our numbers increase in a greater proportion daily, it would seem that for a few years our principal outlet for emigration may be partially blocked up. It appears more than probable that for some time, owing to late commercial disasters, and it may be because corn-growing in the west has been somewhat overdone, the United States will not find employment for that quarter million of emigrants, more or less, that we are accustomed to send to her. This is the most important problem that can occupy statesmen, and at the

same time the most difficult for a statesman to face. For Parliament can seldom see its way to interference. Nor is it indeed desirable that it should do so. Legislatures and governments have at various times attempted by direct laws to benefit the working classes; but the most obvious instances of this—the national workshops of 1848 and the decrees of the Parisian Commune in 1871—have been conspicuous failures. It is well then that in this present time, so peaceful and blessed for us, we can here discuss, however slowly and imperfectly, the pregnant topics which our programmes suggest.

And there is so much to be done; our civilization is so little removed from barbarism. At this moment there is a daily column in the newspapers devoted to recording brutal outrages, where human beings have behaved like wild beasts. Every policeman in London is assaulted on an average about once in two years. Within the memory of living man the workers at the salt-pans of Joppa, only a mile or two from Edinburgh, were serfs—*adscripti glebæ*—and sold along with the land on which they dwelt. Neither they nor their children could move from the spot, or could alter their calling. The late lord provost of Edinburgh, who bears the honoured name of Chambers, records his having talked to such men. What a hell, too, was described to Lord Ashley's commission of 1842. In the mines were women and children employed as beasts, dragging trucks on all fours, pursuing in fetid tunnels the degraded tasks which no mere animal could be found to undertake. We know that equal horrors existed in the brickfields two or three years ago, when there were 30,000 children employed, looking like moving masses of the clay they bore, whose ages varied from three and a half years to seventeen, and when an average case was thus described:—

'I had a child weighed very recently, and though he was somewhat over eight years old, he weighed but 52½ lbs., and was employed carrying 43 lbs. of clay on his head an average distance of 15 miles daily, and worked 73 hours a week. This is only an average case of what many poor children are doing in England at the present time, and we need not wonder at their stunted and haggard appearance, when we take into account the tender age at which they are sent to their Egyptian tasks.'

Then again—

'All goodness and purity seems to become stamped out of these people, and were I to relate,' says a witness, who worked himself in the brickfields, 'what could be related, the whole country would become sickened and horrified.'

It would not indeed be difficult, and it would be painfully

instructive, to draw out a dismal catalogue of facts to prove how little the splendour of our civilisation differs from the worst horrors of barbarism. And yet, after all, we can only come to the hacknied conclusion that the sole remedy for this state of things is education, a humanizing education. It is not a particularly brilliant or original thing to say, but severe truth is seldom brilliant and original. There is a noble passage in De Tocqueville, known probably to all, and too long to quote here, which points out that knowledge is the arm of democracy, that every intellectual discovery, every development of science, is a new source of strength to the people, that thought, and eloquence, and imagination, the divine gifts which know no limit of class, even when bestowed on the enemies of the popular cause, yet serve it by exalting the natural grandeur of man, and that literature is the vast armoury, open to all, indeed, but where the poor, who have hardly any other, may always find their weapons. These, I say, are features of education which all recognise, though some may profess to dread them. But there is a general expediency besides. Take the case of machinery. The winter nights of 1830 were bright with blazing rick yards. No farmer in the southern counties felt his stacks safe. There was a time of terror in England and of retribution. 'In Kent,' says Miss Martineau, whose name terminated the eloquent address of your late President, and which, indeed, it is not easy for any such discourse to omit, 'there were gibbets erected on Penenden Heath, and bodies swung there in the December winds—"bodies of boys about eighteen or nineteen years old, but looking much younger;" brothers, who had said to each other on arriving at the gallows, "That looks an awful thing."'

Again, take the Luddite riots of 1812 and 1816, where cunning and furious mobs nearly stamped out lace manufacture at Nottingham. The broken frames and the burning ricks were ignorant protests against machinery. Well, intelligence has marched a little, and what is the case now? What do the Associated Masters—no unduly partial authority—affirm?

'The accuracy of this statement is manifest from the fact, that the operatives are now the earnest advocates for improvements in machinery, whereas twenty years ago it was no uncommon thing for them to strike at the factory where they were introduced.'

Here it seems to me that we can put our finger on definite and tangible progress due solely to increased intelligence. Take another case which shows the need of it. Wages were never probably so high in England as in 1873. Nine years

before an increasing spirit traffic paid 9,692,515*l.* to the excise. In the last financial year the excise receipts from spirits amounted to 14,639,562*l.* I am not one of those who are appalled, certainly not surprised, by this expenditure. But see how it strengthens the argument. A man who has little but natural instincts to guide him comes into a fortune, and at once procures himself an increased quantity of what has been in smaller doses an enjoyment and a solace. Has he been educated to find his amusement elsewhere? If one of us should succeed to a large fortune to-morrow, we certainly should not spend our inheritance in drink; but the difference, I venture to say, is one solely of culture. Well, my contention is that in an educated country, among a nation educated, not in Shakespeare and the musical glasses, but so instructed as to be able to find amusement outside the public house and skittle alley, a great increase in wages would not have been followed by so enormous an increase in the consumption of spirits; and an enormous consumption of spirits means an enormous amount of crime and pauperism. The assertion is capable of proof which is almost direct.

The best educated country in the world is Saxony. This is what a Saxon mining superintendent says: 'We have a few who drink brandy, but as a rule they are steady.' Take another country where education is universal. 'In 1819, compulsory laws, requiring every parent to educate every child, were enacted in Prussia. At first, of course, there was a violent opposition, and the usual hue and cry of "invaded rights"; but in twelve years crime and pauperism had diminished 40 per cent.'

Moreover, we not only suffer morally but materially. Pay-day in England is often followed, not merely by drinking, but by a blank as regards work. 'If you pay,' says Mr. Brassey, 'wages weekly on Saturday, it rarely happens that any considerable amount of work is performed on the Monday. On the Trent Valley Railway payment of wages took place, at the commencement of the line, once a month. The pay-day was followed by the same incapacity for exertion which is unhappily still observable.'

Take the colliers. The papers have been filled for the last year or so with anecdotes of the colliers, their immense earnings, their expenditure in champagne and horses and hot-house fruit. I am persuaded that there is a large section of society which believes that the colliers pass three days a week in sucking peaches and driving tandem. But what is the state of intelligence among even the younger generation of colliers?

'Out of 50 (lads) examined in nine different night schools in 1867,' says Mr. Sandford, '29, or 58 per cent., could not read. These night scholars are certainly not the most untaught of the collier lads. "There's none of them as can read in our pit" (I heard two young colliers say); "No, nor the master neither."' And yet we wonder that our colliers do not invest their earnings wisely.

I will only put one more case. Improvements in locomotion have made life more easy, but also more cheap. Our lives are staked on the exact intelligence of each of a great number of comparatively uneducated men. When we recollect the nice adjustment, the momentous punctuality, which are required of a pointsman or a signalman, and all that depends on them, we should ensure that such responsibilities should not be cast upon men whose faculties have not been carefully trained. In addition to all the other chances of life, there is but a point which separates a railway passenger from death. And yet we act as though education were desirable indeed, but not imperative.

Well, but it may be asked, to what does this recital of known facts tend? To a very simple proposition. I cannot believe that there ever was a more clear necessity before any government or any country than the imperative duty laid upon ours to institute a directly compulsory education. Among the upper classes such compulsion exists, more stringent than any enactment that a legislature can frame, and one which every pressure in this direction laid on the lower classes will increase three-fold: the compulsion is moral and the penalty is extinction. If the upper class shall become less educated than the class beneath it, we may take it for granted that by a natural process of subsidence that upper class will sink to the bottom, and that lower class will rise to the top. We are told that such an enactment would be an interference with individual liberty, and that the nation is not ripe for it. If the assertion be true that the nation is not ripe for the reception of an undoubted benefit—a benefit as clear and as certain as fresh air and pure water—we can only be the more certain that this education is greatly needed. If it be seriously argued that the interference with individual liberty is too stringent, we must call into the witness-box Macaulay's well-known schoolboy to assure us that a policeman, a tax, and a railway bill are all direct interferences with individual liberty. The natives of Scotland are not considered unduly servile, yet they submit to compulsory education. The same cry was raised in Prussia more than half a century ago, but the education of her people

has not merely effaced Jena and its consequences but produced the German empire of to-day. I should not have adduced facts sufficiently well known to everybody, if it had not been apparently necessary to prove a self-evident proposition: that in these days knowledge is strength and immediate strength, and that education has revived, in its most startling aspect, the exploded doctrine of the balance of power. It seems certain that that unhappy phrase, which, like a perverted rod of Moses was only applied to cause streams of blood to flow, will be verified with regard to educated and uneducated nations. We raise armies with great distress and expenditure—armies from which the annual desertions are little less than 6,000—we never weary of forging plates of iron with which to resist cannonades we trust never to encounter—we construct artillery which we hope may rather be superseded than employed—we impose loads of taxation for all this, and we heedlessly neglect the true leverage of all present empire. I venture to suggest that a social science congress has no fairer field than to urge upon government this peaceful method of supremacy, so congenial to its theories, and that no government worthy of the name should shrink from an invasion upon these, forsooth, sacred liberties of the subject.

The question is one of security, but power requires something more. We require, if we would remain what we are, a special education of two kinds. The first I would venture to urge, with the more confidence as your memorial on the subject has done so much, is general instruction in economical principles. The science of political economy is not at this moment, perhaps, in particularly good odour. It is fashionable for people who pride themselves on being warm-hearted to flout political economy; though I think that those who have heard Mr. Fawcett speak, or who have read the Autobiography of John Stuart Mill, would deny that political economists are bloodless beings. But in spite of easy sarcasms, the fact of direct utility remains. Take the case of strikes. Strikes are only one development of that slow but gigantic process by which all over the world capital and labour are readjusting their relations, and that supreme tendency in this age, of men as well as of nations, towards glomeration. In the first clash of conflict they may have disturbed our trade; but with a larger intelligence, based on economical principles, is it not certain that each side will discover that their prosperity must be mutual, and their interests inseparably entwined? Again, consider for a moment. Strikes are rare in Germany: in Wurtemberg, where every individual in the kingdom above the age

of ten can read and write, they are unknown. It is true that in the United States, owing perhaps to sudden commercial crises that have occurred there, they are on the increase; but it must be honourably remembered that the Executive Committee of the New York Tailors' Union in 1869 announced the termination of their strike, and at the same time their determination to abjure strikes for the more valid support of co-operation. What are the bloodiest and most perilous strikes whereof we have record? Surely the strike of the Belgian miners in April 1869; and the strike at Creuzot of January 1870, which was suppressed by bayonets, and which anticipated the Commune. In both countries thirty per cent. of the population are unable to read or write; from both countries proceed the wildest economical theories. Is it fanciful to see a connection between these facts; to believe that a comparatively slight knowledge of economical truths would prevent vexatious strikes, or at any rate to hope that the day may come when the relations of capital and labour may be largely improved by the teaching of political economy in our public schools?

But there is a second kind of special education that we need. Every man, indeed, is entitled to this—that he shall be able to obtain a general education fitting him to become a good citizen. To this the State must look as a moral duty. But beyond the duty comes the expediency. If a State, after doing its duty, has time to think of expediency (and this, indeed, as the world goes, is reversing the order of things), it should consider whether in these days, when the essence of prosperity is commerce, and the essence of commerce is rivalry, it be not well, by special training, to fit the producers for production and the distributors for distribution. The want of this special education is the real requirement of our industry, without which certain natural advantages, supposed to be inherent in the Anglo-Saxon race, will not avail us in the struggle for commercial predominance. It will not be new to you to hear that without technical knowledge, and without a generally diffused knowledge of the principles of trade, a nation may easily lag behind in the world of commerce. The truth, like all truths, is not new; the alarm-bell has been ringing for years. Professor Tyndall in 1867 said, 'I have long entertained the opinion that in virtue of the better education provided by continental nations, England must one day, and that no distant one, find herself outstripped by those nations both in the arts of peace and war.' We are living now riotously and recklessly; we are consuming far more coal than we need; we are spending selfishly the rightful heritage

of our posterity. Instead of this, our anxiety should surely be to husband our powers and to educate our people, for we have no new dominions to explore; our island is no more capable of expansion than a quarter-deck. We should look the future boldly in the face.

See the effects of technical education in one simple case. Switzerland is hemmed in with mountains, her climate is unfavourable, her soil is limited, her one resource of water-power is precarious and expensive; she has no coal and no harbours; yet she threatens the silk trade of Lyons, and takes the ribbon trade of Coventry. Her exports of silk alone rose in the eleven years between 1860 and 1871, 147 per cent. in quantity, and 132 per cent. in value. Can any cause be assigned for this but the complete and special education which she gives in primary schools, and practical schools, and trade schools, and secondary schools, and cantonal schools, all topped up by the great Polytechnic Institute of Zurich. The Swiss manufacturer lives simply, he is a master of his business, and his workmen, with whom he is in perpetual contact, respect him for this. Master and servant have often been at the same school learning their craft; they know it thoroughly, and though it is said that the English operative will get through in ten hours as much work as a Swiss in twelve, yet, judging by results, we may believe that the technical knowledge of the one brings him on a level with the physical capacity of the other.

And the mention of Switzerland leads me to say, that technical instruction is needed as much by the master as the workman. Mr. Scott Russell, in his interesting book on technical education, points out with great force how the practical ignorance of the master may earn him the contempt of his men; the ignorance and the distrust produce the middlemen who still further estrange the two parties, and the result is complete want of sympathy on both sides, with all the evils that that want implies. The master becomes a remote figure-head, the interest of the workman in his work passes away, the honour of perfection and the pride of finish. Hence there originate those modern contrivances which designedly suppress superiority in order to produce a dead level of wage for the good worker and the bad; contrivances which may serve the temporary purposes of strategy, but which strike at the root of character. 'In the end,' says Mr. Russell, 'men cease to care for excellency or sufficiency of work. They end by treating with mercantile masters for mercantile terms; they say to him who cannot appreciate good work, "you shall pay us all alike," and they are right, for where men are paid unequally, by the mere favour of a foreman, middleman, or manager, or by mere

whim of an unskilled master, promotion is but another name for favouritism, and is most unjust to the best man. But this forced equality reacts again upon skill, and takes away all direct encouragement to personal superiority.'

In another branch of technical education we are almost entirely deficient; I mean a rational education for commercial pursuits. The German clerk who comes to England astonishes our merchants not merely by his mastery over two or three languages, but by his mastery of the principles and rationale of his business. In a nation like ours it would be supposed there would be ample means of instruction in commercial principles and practice. As a matter of fact there is but one professorship of the Principles of Commerce in the United Kingdom, and that has neither endowment nor scholarships.

It is probable that technical and commercial education will have to be provided by the State in England; it is more than probable that it will not be provided till our eyes have been opened to its necessity by grave and painful facts. But here in Scotland we have educational endowments, bequeathed by commercial men for the benefit of their class, which are of little use at present, and which might fairly be devoted to giving practical, commercial and technical instruction. There is the noble revenue left by George Heriot, who, from what we know of his character, would have rejoiced to see these days of prosperity in Scotland, and to further that prosperity with his fortune. A Royal Commission is giving its attention to this subject, but it has no executive powers, and public opinion has more influence on these points than a hundred Royal Commissions. And it should be remembered that if Scotland out of her endowments could set on foot a successful practical or polytechnic school, she would—to paraphrase the words of Pitt—'having saved herself by her energy, save England by her example.'

Again, take the case of agriculture. It has been said that the agricultural production of England might be doubled if more capital were put into the land. It is not easy to verify statements of this kind, but it is certain that more special knowledge of agriculture would have to precede the larger application of capital. I suppose there is no country in the world where so much farming capital is laid out to the acre as in the lowlands of Scotland. But this was not the case till Lord Haddington, at the beginning of the last century, sent for farmers from Dorsetshire (where perhaps a return of the favour might not be unwelcome now) to give special agricultural instruction in his neighbourhood.

What a demand there is for special agricultural education,

not merely on behalf of young men who wish to become British farmers or land-agents, but of those who intend to emigrate to our colonies. See how many youths there are who come to board with our great farmers as pupils in agriculture. The efficacy of this method is indeed doubtful; the pupil has generally too much independence, and the tutor not enough authority, but this very fact proves the strength of the demand. And these are the men who go out to our colonies, and influence the destinies of future empires. Would it not be well then, as the demand for this education exists, and as it has so direct a bearing on the prosperity of the country and of our labouring classes, that the government or we ourselves should devise some means of meeting it? In Wurtemberg, where there is a carefully contrived system of public agricultural instruction, there were, in 1868, 12,040 persons being educated in these schools.

And here, though it diverges for a moment from the main subject, I must say that I am not one of those who recommend special education for one class alone. I cannot see any argument in favour of technical education for the artizan, which does not go much further. The only class for which, so far as I know, technical education is never even proposed, is the class for which it is most necessary—I mean our rulers. Is there any school or college in Great Britain which professes to educate men for government or statesmanship? Eton, I believe, trains a very large proportion of our legislators, yet I have grave doubts if Eton provides any special instruction for them in their future duties. We have medical colleges, and clerical colleges, and military colleges, and some of the best minds of the country are now devising schemes of legal education. We have no hereditary surgeons, or priests, or soldiers, or lawyers. We have, however, a large body of hereditary legislators; we have a considerable number of men who are hereditary legislators during good behaviour, for they and their fathers before them have sat in Parliament so long as they were solvent and respectable. But for these technical education is not provided or even contemplated. We agree that an artizan cannot do his work properly without special instruction, but for those to whom we entrust our fates, our fortunes, and our honour, no such training is requisite. It is expected and assumed that a peer shall take to politics as a duck takes to swimming. Nor have we improved on our fathers. Macaulay tells us that it was considered wonderful that the elder Pitt had never read Vatel. But can we feel any certainty that every member of Parliament has read *The Wealth of Nations*? Suppose candidates

for Parliament were examined like candidates for the civil service, or for commissions in the army, should we discover the sure traces of training in political history and political economy? I venture to say that there are many members of Parliament who would themselves be the first to lament the deficiencies of their education in their craft, and the labour with which they had at a later and busier period of life to repair them.

But to return to the artizan class. The agencies I have named are external, but there is an internal agency, by which workmen have effected much for themselves. I mean by applying the principle of union. It is true of course that unions among workpeople, with a view to the artificial raising of their wages may hamper production, and harshly control freedom of action. On the other hand, they have often been of real service by promoting intelligent communication between workpeople in different parts of the country, and in ascertaining the due recompense of labour. Few impartial persons will be disposed to deny that though it has caused bitter feelings on both sides, as all such revolutions must, the great social movement which has recently united the English peasantry is likely to diffuse enlightenment, to encourage independence, and to place wages on a more clear and rational footing. The natural adjustment of the right proportion between the profits of capital and the wages of labour is a tolerably sure, it may be, but certainly a very slow process, and union among workmen has had a beneficial effect in hastening it. Strikes, which cause so much distress, and which so greatly hinder production, we must lament. But so long as capital and labour continue distinct and opposing interests, is it likely that strikes will be rare? Co-operation, indeed, is the obvious remedy for all these troubles: but co-operation can hardly, so far, be considered a success in this country; it appears to require a more general intelligence and a greater accumulation of capital among the working classes than exists at present. The largest co-operative association for productive purposes in this country is that of the Ouseburn Engine Works. Yet, even here, with the strictest co-operative democracy, a strike has recently taken place of certain of the workmen against the Association, that is, against themselves. In agriculture, the Speaker of the House of Commons attempted a co-operative experiment so favourable to the workman that, even had it succeeded, it would have been no pledge for the success of ordinary co-operation. Yet his men, although they were to receive when the year was good, and to lose nothing when the year was bad, did not, it appears, take a single share.

So that, as regards co-operation, we cannot say that at th moment we have much reason to look for assistance from th quarter.

But union, as a principle (and union of some sort must, c course, precede co-operation) is the great watchword of our ag Nowhere has the multiplication of unions been more extraordi nary than in the United States. The very names of some o them are quaint enough—the Advocates of Justice, the Knight of Honour, the Sons of Toil, the Brethren of Labour, th Sovereigns of Industry. But incomparably above these them towers the gigantic association of the Patrons of Husbandry, commonly called the Grange: a great agricultural, co-operative, independent union. Its progress has been amazing. Its first Grange or lodge was formed in the last month of 1867; there are at this moment 20,500, with 1,311,226 members. At the end of the year it is certain that they will have 30,000, with two million members. The order is practically identical with the agricultural population of six states, and with two-thirds of the farmers in ten others. In Missouri alone there are said to be 2,150 Granges; they are making way in Canada. Pennsylvania began the year with six lodges, and at this moment she has eight hundred. Why this enormous increase? The answer is simple, for it is alleged that membership adds not less than 50 per cent. to the income of the Grangers. The Californian Granges have their own fleet, and ship their corn direct to Liverpool, by which they saved two million dollars in freights in the year 1873. Their vessels bring, as return cargoes, tea, sugar, coffee, silk, and other commodities, which are retailed to members at cost price; and a system is being organised by which their ships shall return with loads of every foreign article which the members may need. They are thus an independent mercantile nation. But they are more. They have a social, religious, and political, as well as a co-operative aspect. They have a secret pass-word, renewed annually, Grange banks, Grange plough manufactories, Grange grocery stores, besides Grange poems and Grange burial services. They declare that they are going to labour for the good of all mankind, of which they intend to raise the standard. They mean to secure obedience to the laws and general brotherhood; and on the other hand to suppress fashion, bribery, and selfish Their very success has made them run into ex that success is a social symptom we

To pass to the physical conditi problem at once presents itself ir poor. This is a subject which

one of our sections; and, indeed, it is locally interesting, for it is one of the fields in which the present honoured Provost of this city has gained distinction. Municipal improvements and the increased value of land in towns are daily thrusting the home of the artisan further from the scene of his labours. This is in itself by no means an evil. The demolition which obliges the crowded inhabitants of an alley or a close to seek homes in a purer air may almost be considered a blessing; where tramways exist it certainly is so. Tramways have done much in many places to solve the great question of healthy and handy dwellings for our workmen. They are, indeed, the inconvenience of the opulent and the luxury of the poor. You may always measure exactly the extent of democracy in a country by the extent of its tramways. But for a concentrated nation like the population of London tramways are insufficient. Trains form the means of transit between the work and the home of the artisan. Of late, however, a tendency (to call it by a mild name) to the discontinuance of cheap early trains has been shown by railway companies, partly because they are not profitable, partly, it may be, as a means of compelling the Legislature to abolish the passenger duty. This raises the large question, which is always perilous for undertakings of great public utility conducted by private enterprise, how far railways should be regarded as purely commercial speculations which need not regard national interests in the very least. Much in the way of private interest, the homes of rich and poor alike, are and have been sacrificed to railways as being a universal benefit. So long as they continue to be so no complaint of private injury can be made. But if railway directors forsake this high ground, announce themselves as the managers of mere commercial speculations, and disregard that public convenience which they receive privileges to protect, they may chance upon evil times. If the Legislature shall once be called upon to weigh the privileges accorded to railway companies against the conveniences they concede, it will probably not treat the question as purely one of dividends.

But besides the facilities of railroad and tramway, other efforts have been made to solve in some degree this difficulty. There are the buildings erected by the Peabody trustees, where, however, some inconvenience is said to be caused by the rule that no work may be done at home. Nor is it quite clear that the tenants are of the class for which the houses were intended. Then there are several building companies which not merely provide excellent dwellings, and thereby raise

the character of the other houses in the neighbourhood, but which pay fair dividends besides. Thus the Metropolitan Association pays an average dividend of five and a half per cent. The Improved Industrial Dwellings Company pays five per cent. The London Labourers' Dwellings Society pays five per cent. The Artisans' Labourers and General Dwellings Company pays six per cent. This last Association has built the Shaftesbury Park Township, which was inaugurated under brilliant auspices this year. There are no public-houses or beershops on that estate, but the demand for the cottages, some hundred in number, far exceeds the supply; and the success of the undertaking has been so great that the directors have just bought another property in Harrow Road, which will accommodate fourteen thousand more inhabitants. 'While Parliament,' writes the manager, 'is discussing these questions, I venture to submit that we have practically solved the problem.' Nor can I disagree with him.

In other countries we may notice the curious experiment of the Social Palace of Guise, but which at present is only an experiment, and one which probably would not adapt itself to the habits of this country, as well as the Cité Ouvrière at Mulhouse, which, however, affords us no assistance as a precedent, for one half of the required capital was contributed by Government. In Belgium, also, the Messrs. D'Andrimont have erected a very complete hotel—the Hotel Louise—for their colliers, which gives a fair return for the capital invested, and where the food is as economical and as good as in one of the famous cheap dining-rooms of this city.

In New York the difficulty of getting good houses for the poor is greater, if possible, than here. The houses are built by great landlords, most of them large owners of real property, who lease them to middlemen, who in their turn sub-let them at an enormous profit. The owner gets six or seven per cent. for his outlay, the middleman makes from fifteen to thirty more out of the tenants. The consequence is that rents are enormous, and in the opinion of many eat up the difference between the wages of unskilled labour there and the same wages here. It is melancholy that such a state of things should exist in a city which offers so many attractions to the thrifty artisan, and knowing as I do how many good hearts and heads in New York are perpetually ready to assist in any scheme which may benefit their poorer neighbours, I cannot doubt that some method will be devised of bettering the present condition of affairs. There are so many men in America who bequeath their fortunes to philanthropic objects that it seems

a pity none should have devised money for the formation of a township like that at Shaftesbury Park.

It is only fair to add that the case of New York is exceptional. It is greatly overcrowded, owing to the immense number of immigrants who landing there proceed no further. In Philadelphia things are much better. An excellent system prevails there, by which landlords build neat small houses, and let them directly to working men for about six per cent. on the investment, with the privilege of buying outright at the original cost during a certain number of years. In this way there has grown up in that city a large class of small freeholders who are probably the most prosperous body of their class in the world, and a very backbone of strength and order in the commonwealth.

Another great effort is being unobtrusively made for the comfort of the population. The enjoyments of club life, which have such an attraction for the Anglo-Saxon race, are being extended to the artisan. The admirable promoters of this movement believe, and with fair reason, that as public-houses offer social attraction to the tired workman irrespective of drink, so clubs are the most formidable competition which the public-house can have. 'When every man,' they say, 'has a club and institute within reach, where he can find better society and more varied recreation than at a tap-room, he will leave the latter for the former.' In Wisbech, with a population of 12,000, there is a club with 700 members, with extensive buildings, comprising a gymnasium, a hall, a clock-tower, and a library, with 1,089*l.* deposited last year in its savings' bank, 464*l.* in its coal club, with classes of music and of science and art. It is said that there is a visible difference between the private homes of those who are members and those who are not. In Dundee there is a club of 1,000 members, with interesting discussions on public affairs, with lectures of a high class on social and political topics, with an almost ghoul-like appetite for blue books. Beer is here supplied, and there is no abuse. The achievements of these clubs (and I am only giving specimens) stir one like the records of great victories. Experiments on a smaller scale, but equally interesting, are the two clubs at Brighton founded by costermongers and hawkers, with the object, to use their own words, of raising their class 'out of the gutter.' There are at least 555 working men's clubs in England and Wales, and twenty-four in Scotland, embracing altogether about 92,000 members. Here surely is a definite social agency with indefinite possibilities.

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Nor must we forget the savings' banks, where those who believe that the sole result of high wages is more drink should notice that in the past year the number of depositors in the Post Office savings' banks increased by 120,000, and the amount of deposits by 2,000,000*l.*, making the whole number of depositors a million and a half, and the total amount of deposits 21,000,000*l.* Moreover, this does not represent the whole amount of thrift, when it is remembered that the Scottish banks allow interest on small deposits.

I now come to a large division of the subject, where we may thankfully remember that much has been effected during the present session of Parliament. We have considered some of the means, at any rate, of ameliorating, morally and physically, the great mass of the nation; and as we have discussed how by education we can ensure the progressive march of intelligence among rising and future generations, so it will not be out of place here if we dwell for a moment on another question which relates to the physical preservation and improvement of our race. We all know to a certain extent the history of factory legislation: how the sacred tradition of the great work was handed down by the first Sir Robert Peel, whose claims to national gratitude have been so beautifully obscured by the greater claims of his illustrious son, to Oastler, and Sadler, and Hobhouse, and Ashley, and Mundella. In the last session of Parliament the main principles of Mr. Mundella's Factory Bill embodied in a Government measure passed through both Houses, so that the hours of labour for women and children are now limited to fifty-six and a half in the week. Still, although much has been effected, it may be regarded as serious that so keen and independent a thinker as Mr. Fawcett should have offered determined resistance to the Bill. His argument was founded on the assumptions that those whom the Bill is taking care of are well able to take care of themselves, which is at least a doubtful proposition, and that legislative interference to be logical should be complete, and should extend even to women employed in domestic service. But no one would deny that if great injury to women were to be apprehended as an effect of domestic service—that if, for example, every master was a Legree and every mistress a Brownrigg—the Legislature would have to interfere for the protection of maids. Nothing of the sort is, however, pretended. Now we have evidence, and very complete evidence, that injury is done to women, and not merely to women, but their descendants, by their undue employment in factories. Parliament must, in consequence, determine what limitations

must be placed on factory labour, not merely for the protection of weak women now, but in its own imperial interests for the preservation of health in the children of these women—the future citizens of the country. Nor is it certain that Mr. Fawcett's other assumption, that the classes affected are well able to take care of themselves, is in any degree correct. It is certain that women, from love of approbation, as well as from those feelings of unselfishness which do honour to them as wives, are only too easily led to work beyond their powers. Among girls there is sometimes the further inducement of marriage. 'A woman who can mind four looms without an assistant has attained a certain position. "Hoo's a four-loomer, hoo's likely to be wed," will be commonly remarked of such an one.'

But ours is not the only field: the battle has been fought and won almost everywhere. If there were no other argument, the factory legislation of other countries, adopted in these feverish times of commercial competition, would be sufficient reason for action. In Austria, Prussia, Sweden, and Wurtemberg, no child may enter a factory till he is twelve. In Baden the lowest age is eleven, and in Bavaria nine. In Holland till this year there was no such regulation, but the Chambers last session were forced to adopt the Prussian limit. In Austria and Bavaria, moreover, no woman may work for six weeks before and after her confinement. This bears on the most important point of all. The long absence of the wife and mother in the factory is undesirable, indeed, as it prevents her making a home for her husband, who thus has to seek home comforts elsewhere; but as regards her children it is fatal. In Scotland this seems to be recognised, for in the Scottish flax and jute manufactures 'it appears to be considered somewhat discreditable,' say Messrs. Holmes and Bridges in their report of last year, 'for a woman to work in a factory after her marriage.' The same Commissioners, however, were struck with a very opposite state of things in England. They circulated questions among those medical men who are brought largely into contact with the factory operatives, and 101 out of 132 answers declared that factory labour as at present carried on has a tendency to increase the rate of infant mortality. But the figures they adduce are more eloquent than any words. The medical officer of Salford Workhouse says: 'The total number of deaths in Manchester in four years was 41,805. The number of deaths of children aged five years and under was 20,025, or 48 per cent. In the North of England only 7 per cent. of children under one year

die annually. Nearly 25 per cent. die in Manchester.' 'An old factory surgeon,' say the same authorities, 'puts the general opinion in unusually forcible words, when he says: "I regard the mother's return to the mill as almost a sentence of death to the child."' The president of your sanitary department, Dr. Playfair, made a report some twenty years ago, showing that when trade was bad, and consequently the mothers had to remain at home, infant mortality fell materially, and that when trade was good, and they returned to the mill, it rose again. Surely, then, for the sake of the next generation, we should see if something cannot be done to protect mothers, and those about to become mothers. It is a delicate subject, I know, but the facts are too serious to be neglected; having admitted by legislation the principle of interference, let us get all possible benefit from that admission. M. Dollfus, of Mulhouse, struck by the evil, allowed six weeks' salary to his workwomen who were *en couches*, that they might remain at home; and found that by this means he diminished infant mortality no less than 13 per cent.! The same philanthropist is trying another experiment by building a number of houses, each with a workshop connected with the main machinery, so that the mother can be at her work and keep an eye on her children at the same time. In this way he tries nobly to solve the problem of having female workers without neglected families.

The question, then, is one not merely of politics nor of economy, but it is the supreme consideration of humanity. We have led the way in legislation of this sort—almost all great nations, jealous of our commerce as they may be, have hastened to follow us. Surely this is sufficient answer to those who fear diminished production and successful foreign competition as the result of these acts. France took no initiative in this matter; but, after the great disaster of 1871, the French were so impressed with the physical aspect of the German race, and perhaps also by the alarming facts as regards their own population, that they appointed a commission on the subject; and France is, except Russia, which is scarcely European in its ideas, the last great power to join in this war on behalf of humanity.

But there is a higher ground for this legislation with us than with any other nation, and one on which every topic I have urged to-night rests for its support. The conditions of life in this country are rapidly reversing themselves. Wealth is doubling itself, and increasing the population; greater care in management and subtlety in mechanical appliances are

diminishing, and must further diminish, the proportion of persons employed, especially in agriculture: here is the problem, daily a greater population, daily in all probability less work, which means less subsistence. We are shut up by the sea with our surging myriads: a source of strength if guided and controlled; if not, an immeasurable volcanic power. Many of them must go forth to people the world. Our race has colonised and colonises, has influenced and influences, and in future ages seems likely further to colonise and influence, a great part of the habitable globe. So great has been our field of operations that we can only view it with awe. It has been and is a great destiny for this country to sway so mightily the destinies of the universe. But the great privilege involves a sacred trust. We must look to it that the fertile race we send forth to the waste places of the earth is a race, physically, morally, and intellectually, equal to its high duties. At present we will not compel our children to be educated, however rudely; at present in one of our cities nearly a quarter of the infants born die before they are one year old.

In one of your sections you propose to discuss 'What are the best means of drawing together the interests of the United Kingdom, India, and the Colonies?' I submit that the primary means are to send forth colonists who shall be worthy of the country they leave and the destiny they seek. The different agencies I have noticed to-night all tend to this: whether we keep them in England or they pass from us, we must look to the nurture of this race of kings. We annually distribute through the world a population nearly as large as the population of Birmingham; in the last two years more emigrants have left our shores than there are inhabitants in Glasgow and Dundee put together. After all, whatever our commerce or political influence may be, this is the most gigantic enterprise in which this or any other nation can be engaged; and the responsibility of its success, not merely for the present, but for countless future generations, lies with us. Will this great stream pass from us a turbid flood, composed of emigrants like some we now send forth, who shake the dust off their feet and swear undying enmity to us, or shall it be a broad and beneficent river of life, fertilising as the Nile, beloved as the Ganges, sacred as the Jordan, separated from us, indeed, by the ocean, but like that fabled fountain Arethuse, which, passing under the sea from Greece into Sicily, retained its original source in Arcadia? We do not know what our fate may be: we have no right perhaps to hope that we may be an exception to the rule by

which nations have their period of growth and of grandeur and of decay. It may be that all we most esteem shall fade away like the glories of Babylon. But if we have done our duty well, even though our history should pass away and our country become

> 'An island salt and bare,
> The haunt of seals and orcs and seamews' clang,'

she may be remembered not ungratefully as the affluent mother of giant commonwealths and peaceful empires, that shall perpetuate the best qualities of the race.

I am led to make these remarks specially here, for we are constantly asked why we exist, when there are Parliaments and convocations and synods who discuss with ample fulness every imaginable topic. Now I have only mentioned one of the topics with which a Social Science Congress is specially fitted to deal; yet how vast this single subject appears. Indeed, it is difficult to see any limit to the possible usefulness of a meeting like the present. The questions relating directly to the amelioration of our race rarely occupy the attention of Parliament. On the other hand, it would appear to be the essential duties of a Congress like ours to promote real civilization, to mark what progress is therein made; nay, to prove, if possible, its very existence. The outward signs of our civilization, vaunted and doubtless as it is, are an extraordinary accumulation of wealth and an extraordinary consumption of alcohol. Abstract thinkers might indeed imagine that we should display greater culture, greater control over passion, greater intelligence, greater comfort, more perfect system, less violence, less bigotry, less crime. I am not aware that in these respects we even profess to be much better than our nighbours. While this is so, surely the existence of a Congress for the real promotion of social science should be an important national fact, an actual national benefit.

Moreover, no one who would appreciate a Social Science Congress can forget that we live in remarkable times, times of social development so ominous that we may be approaching a period of social revolution. What a change from that old world whence this fertile brood of nations sprang. On the one side a dark surging mass of barbarians, on the other the inevitable stern immobility of the Roman Empire. Now the whole universe seems undergoing the volcanic influence of social theory. Everywhere there is breaking out some strange manifestation. The grotesque congregation of the Shakers, the agricultural socialism of Harris, the polygamous socialism of

Mormon, the lewd quackery of Free-love, the mad blank misery of Nihilism, the tragic frenzy of the Parisian Commune, are portents no observer can neglect. Some try to solve the problem of life by abolishing property, some by a new religion. Most of these experiments thrive in America, which alone has room for such vast diversities of opinion and practice. It is too much the fashion to treat these various organizations as a mixture of knavery and folly. Two, indeed, of these phases of humanity will receive more attention from the historian of the future than they attract from their contemporaries—I mean the Commune of Paris and the Church of Latter-Day Saints. That eccentric Church is a socialism founded on a polygamous religion, and ruled by a supreme pontiff. But it would be a mistake, I think, to suppose that polygamy is an essential part of Mormonism. The traveller in Utah will be struck most, not by the plurality of wives, but by the prevailing industry and apparent external brotherhood. These are the outward features of an extraordinary community. That it should largely increase, that it should have converted a desert into a garden, that it should in the last few years have attracted to it thousands of the working-classes (not by polygamy, for that is expensive, and almost all the emigrants are poor), will seem to a future age a strange sign of our times.

Again, whatever may be thought of the Commune of Paris, which issued quaintly ingenuous decrees, and which ended in blood and iron, it will always remain one of the sinister facts of our age. Like the Ninevite King, it perished in a blazing pyre of what was fairest in its habitation, and the world lost so much in those flames that it cannot now pass judgment with complete impartiality. But as a gigantic outbreak of class hostility, as a desperate attempt to found a new society in the very temple of the old, it has hardly, perhaps, received sufficient attention. Far be it from me to attempt to palliate the horrors of that disastrous conflict; they, however, are only terrible accessories. But the ominous fact of that sudden social revolution is a portent which cannot be blotted from the history of humanity.

While human beings then remain human beings, and while efforts like these are made for complete social reorganization, a Social Science Congress has even more scope than a Parliament. Besides the special legal business by which this Association has long been distinguished, and which is connected with its birth, it can, as I said, watch and record civilization; it can attend to those social matters to which Parliament cannot or

will not attend; it can discuss and prepare projects of legislation which may be subsequently adopted by the Legislature; it can criticise with the advantages of special information and freedom from party prejudice the bills actually laid before Parliament; it can ventilate and sift theories which are not yet ripe for reduction into a practical form; it can keep in view as its special and supreme duty the furthering of every scheme which has for its object the making man more self-reliant, more comfortable, more independent of Government and such external agencies, better citizens, and happier men. And in accomplishing this we achieve yet more. One beautiful result of these labours is to bring together, from all parties, from numberless nations and creeds, so many real friends of humanity, bound here in a sacred league looking to a sacred end, however much they may differ as to the means. Never was such a league so much needed as now in the history of the world. Never was there on all sides so much of energy and skill given to preparation for those efforts by which civilization is retarded and mankind made miserable. The armies of the four great military powers when on a war footing engross three millions and a quarter of men in the very prime and flower of life. Three millions and a quarter of men in four countries, with their swords ready to the grindstone, form a portentous silent fact which we cannot ignore in the halls where we discuss the efficacy of arbitration in settling disputes between nations. In Spain we see a war of dynasty, in America a conflict of colour. The night is dark and troubled; we can but labour steadfastly, hoping for the dawn, united by the sympathy of the living and animated by the example of the dead. In this spirit, gentlemen, I trustfully inaugurate this Congress, and commend you to your labours, convinced that, earnestly pursued, they must be useful, and may bring forth fruit an hundredfold.

Address

ON

JURISPRUDENCE, AND AMENDMENT OF THE LAW.

BY

THE RIGHT HON. LORD MONCREIFF,

LORD JUSTICE CLERK OF SCOTLAND.

THERE are two points of view from which Jurisprudence is generally regarded. One, that from within, whence she appears to the priests of the sacred temple of justice, who venerate even her most trivial rites, and guard her mysteries from the profane. That is the professional aspect of the science. The reverse of the picture is the appearance she presents to the unwilling votaries who are forced to do homage at her shrine—to whom she not unfrequently seems to be arrayed in motley robes, addressed in an unintelligible jargon—issuing incoherent mandates, and making little but a lottery of strife.

In discharging the duty you have imposed on me to-day I shall not represent either class. On the occasion of this Congress, which I regard as a kind of privileged festivity, at which solemnity is entitled to relax, and authority must submit to be treated with familiarity, I feel inclined to avail myself of my temporary freedom, and in a few desultory remarks to bring some of the rescripts of the law to the test of general analysis and of practical utility; to inquire how far, apart from technical rules of art, jurisprudence with us succeeds or fails when it enters the domain of ordinary life, and to point out some general principles by which we ought to be guided in our efforts for the amendment of the law. If, in the views I am

about to suggest, I shall seem to shake the time-honoured branches of the sacred oak too rudely, or to do violence to the reverence due to old tradition, I have only to claim the short-lived privilege of the position which, by your favour, I occupy, and to protest that I do not intend to hold myself committed at any time, or in any way, to any of the speculations of this passing hour.

Although it rests on some broad principles, which are true at times, and under all conditions, yet apart from its operation on ordinary life, law has no empire. It is a science in so far as it beats in unison with the pulses of society, otherwise it is only a name. But within that sphere how great and varied are its aspects. Stripped of its external trappings, its technical phraseology, and its rules of art, so uncouth and distasteful to the public, and so dear to the more intense of its votaries, what pursuit in the whole range of intellectual labour is so full of the very essence of romance? Poetry and fiction aim only at the production of counterfeits—artistic imitations of those things which are the lawyer's stock-in-trade. The poet and the novelist deal with shadows only; he alone is conversant with the substance. The pathos and sublime of human life meet him every day. Fiction may be strange, but the lawyer finds facts stranger still. The emotions which stir the heart, the objects which prompt to action, the impulses of hope or fear, a joy or grief, or love or hate, all come to the lawyer at last. He aids at every turn of Fortune's wheel, although sometimes but scantily thanked when the turn is served.

If, then, the study and practice of the law be dry and dusty, as is the popular impression, it is not because of the absence, but of the constant presence, of the elements of sentiment and human interest. The lawyer cannot stop to cull the flowers in his path, for his objects are too real and too important to be the sport of imagination, and life is too short and time too precious to admit of his dallying by the way. But the exercise of our profession need not on that account, nor does it, blunt the fancy or harden the heart.

But my present object is not to exalt the merits of our guild, but to use these characteristics of law for a purpose more cognate to the objects of our present meeting. Law indeed is a miniature and compendium of life; and it ought to represent, as it professes to do, life as it is—not life as it has been, or as we may hope it may be, but the busy, earnest throbbing of the great arteries of a living community. But between the re-

sponses of the oracle, and those it ought to give forth, the chasm may be great. For what avails it how logical, how symmetrical, how philosophical may be the system we have to administer, built by the learning of more than twenty centuries, if it be not made to fit the emergencies of the day and the hour.

Thus in the great ocean of jurisprudence we have two contrary currents—administration and legislation—one setting in to the past, the other to the future. For those who administer the law, it is immutable. That which has been is that which shall be, and should be. The perfection of the science—which never can be perfect until mankind is so, and then it might be dispensed with—is, that its precepts should ever continue as they have been; and the judge is condemned if the ancient landmarks are removed. When new occasions arise the old occasions must be invoked to solve them, and the old maxims and old formularies must be sought for at the fountain-head.

But while law in its own eyes is immutable, Time, the devourer of all things, even of law, changes those objects for which alone law exists, silently abrading surfaces, effacing features, raising land here, submerging it there, until the end and purpose which the law was made to serve has disappeared altogether, or is so altered in its incidents and its surroundings as perhaps to invert the effect of its provisions. This is a process in constant and daily operation, and one which the administration of the law is powerless to prevent or provide for. It is a process also which lawyers are slow, and perhaps unwilling, to see. It is hard enough to learn the law as it is; without being obliged to look beyond its confines, and to note how far it squares with the times. So an aggrieved community wait until the current of legislation sets in towards the future, and, taking warning by the past, provides for increased equity and security.

But legislation limps with a very tardy foot. The dull ear of the goddess must be long invoked, and hecatombs of injured suitors must be sacrificed on her altar before she relents and redresses. The grievance must be great and general: in other words, a considerable number of people must have suffered injustice before others shall be protected in time to come. Thus, while the country watches at the gates of the Legislature until the tale of suffering shall be complete, there is always a tendency on the part of the administrators of the law to make the new complication fit the old category. So it would almost seem in some instances that, as social relations and customs change, ingenious subtleties and devices are resorted to to enable courts

to apply rules which were meant for one purpose to another for which they were not meant, and to use them to solve combinations of fact of which the makers of the law never dreamed.

But when the ingenuity of lawyers and courts of justice has effectually surmounted by subtle analogy the difficulties of a case unprovided for, arise forthwith suckers and shoots innumerable from this new root, the original subtlety being in its turn adopted as a principle from which new deductions are to be made, until the luxuriant foliage entirely obscures the ancient stems, and we wander in impenetrable thickets.

The true principle on which this inevitable tendency of juridical systems ought to be counteracted is by bringing the law as it stands to the test of public utility, and inquiring how far, in the existing state of social and private interest, it is calculated to promote justice in the average or greater number of instances in which it is likely to be applied. For a law may have been admirable, or indeed essential to the protection of private right, when it was made, and yet, as I have said, productive of nothing but injustice now. The question always ought to be, whether the evil it was intended to prevent, or the benefit it was intended to confer, is sufficiently general, important, frequent, or universal, to compensate for what may be sacrificed. This may be so at one time; at another the reverse may be true. The evil which was dreaded may have become a thing of the past. That which was surrendered to avert it may have increased tenfold in magnitude and importance.

Herein lies one great hindrance to the intelligent amendment of the law. However manifest the incongruity may be, however heavy the counterpoise of the opposite scale, courts of law must hold the balance blindly, and add the weight of authority and tradition to bring the lighter to prevail. Nay, I should not be candid were I not to say that the necessity in the actual administration of the law of shutting out considerations of expediency or general utility, has a tendency to induce practical oblivion of this element, or a very narrow or partial appreciation of it. Thus when any alteration of an existing law is suggested, it is sure to be met by reference to possible cases in which the change would be inconvenient and unjust, and the critic thinks that his object will be attained should he succeed in demonstrating that this would be the result. But nothing can be more shallow or inconclusive. Every law is essentially inconvenient and unjust; that is, in some possible phase of its operation. The question for a philosophical jurist is, which state of the law will prove the most beneficial in the

greatest number of cases; and that question once solved, possible instances of hardship are mere nightmares, which an enlightened legislator must entirely disregard.

Thus the evils which become gradually encrusted on any system of law, and which it is the object of the amendment of the law to remove, arise mainly from the exaggeration of elements sound in themselves, but which, either from original defect or through change in the outward condition of the community, have lost their true proportions, and impair the symmetry, or impede the movements of the mechanism. Some of these I propose shortly to illustrate.

It is too late in the day in this country at least for even the most sanguine of juridical reformers to attempt to construct from essential principles a new system of jurisprudence, or, as Bentham did with great acumen and power, to deduce a new code from abstract views of general utility. For a system of laws is of all things the most practical. It penetrates and percolates through all the interstices and crevices of the social community, and becomes so incorporated with its vital essence as to render severance impossible. Even the least defensible and most questionable laws are not unfrequently so bound round the fabric of society that they cannot with wisdom or safety be removed. Still, in the pursuit in which we are now engaged, it must always be useful to revert to the object which the law was originally intended to attain, and to test it, as far as we can, by sound and philosophical views of its practical operation.

The illustrations which I propose to suggest of this gradual but incessant process of change may not be the most striking, and have no pretensions to philosophic arrangement; but they will, at least, bring clearly out the general principles to be kept in view in every amendment of the law.

Many laws were originally framed, not merely to secure special interests, but to guard against special dangers, and in compliance with prevalent apprehensions. Take, for example, the fear of civil despotism and oppression—a noble element in any system of jurisprudence, and one eminently characteristic of the law of England. In that respect the law of England stands pre-eminent. Whatever the philosophic jurist may say of the irregular but magnificent jurisprudence of the sister country, this element of political and personal freedom is a jewel in its crown which, to the patriot and philanthropist, is beyond all price. Freedom, first of all, is the axiom on which the fabric has been built. Freedom, personal and political, is the basis on which all the superstructure rests. It is impossible to say how much this country, or, indeed, the civilised world, has been in-

debted to the tenacity with which the fathers of English jurisprudence clung to this sacred principle, or the jealousy with which they guarded it. She has paid some price for it, as I shall show, but far within its inestimable value. It pervades the whole system—from whatever quarter oppression was feared—crown, nobility, church; none were to lord it over the liberties of England. Hence the Habeas Corpus—to protect the subject's personal freedom; the Coroner's Inquest—that murder might not go unpunished; the Grand Jury—that the innocent might not be prosecuted; the unanimity of Juries—to avert unjust conviction; and private prosecution, lest the lieges should be sacrificed to arbitrary and tyrannical measures on the part of officers of the Crown.

This, as I have said, is the crowning story of English jurisprudence in times past, fraught with unspeakable benefits to the people, far above what the most philosophical system could have conferred on them, and distinguishing her nobly from the nations of the Continent, and I fear, also, in some measure, from ourselves. Yet it is to our credit that the first judicial declaration, that a slave became free when he touched British soil, is, I believe, to be found in the records of our own Courts. But "the dread sound is past." Our liberties are secure. None of the ancient fears can possess or disturb us now. Is it not possible that some of the ancient safe-guards may sacrifice too much to apprehensions which are now matters of history? Some may think that a Grand Jury has too much resemblance to trying a man in his absence; that a Coroner's Inquest may shield instead of convicting the guilty, and is a needless and painful ordeal when no guilt has been incurred; and that the necessity for unanimity in juries imperils the course of justice, and affords delinquents too easy a chance of escape. These are questions on which I express no opinion, not being sufficiently conversant with the details on which alone a sound opinion can be formed. But they are worthy of consideration in such an Association as this, and more than one of them, I believe, will be the subject of discussion in this section. But the absence of a public prosecutor in the criminal jurisprudence of England affords, I think, a good illustration of the sacrifice of present interest to past and extinct apprehensions. I am not unaware of, nor insensible to, the practical difficulties which long usage and inveterate tradition have woven round the solution of this question; but surely that state of the law cannot square with any canon of justice which adds to the injury inflicted the obligation on the person injured of bringing the culprit to the bar. In this respect, I apprehend, England stands entirely alone in civilized Europe;

but I cannot look on her solitude now as a distinction, although the history of public prosecutions two centuries ago, in other nations, largely explains and justifies her former jealousy. Parliamentary responsibility and public opinion have been found, in our narrower sphere, ample security against the possible abuse of such powers, and a well-matured measure, having for its object to place on the public the duty which properly belongs to it of bringing criminals to justice, would be hailed in England as a relief and a benefit too long delayed.

But the one great sacrifice which the jurisprudence of England has laid on the altar of liberty is of a much larger and wider description. She renounced and disclaimed the authority of the Roman law, and by consequence the authority of all the continental systems built on that stable foundation. It was the law of despotism—that was enough. Its illustrations dealt with men and women as chattles, articles which might be the subject of mercantile transactions, which might be sold or bequeathed. That could be, in the judgment of the founders of English jurisprudence, no law for the free soil of England; and so, without any extraneous aid, renouncing participation in a sympathy with the jurists of other nations, the labours of many generations of great and fearless men have built up a legal fabric out of materials found on English ground alone; rude at first, but massive and permanent, and now closely welded into harmony by the ability of her Courts, and the transactions of the greatest commercial nation in the world. Yet the result attained has been reached at no small sacrifice. The isolation of the law of England among European systems is a disadvantage; the entire singularity of the language it speaks, of the axioms it acknowledges, of the paths which it travels, unquestionably fetters and limits its range. The results arrived at, I admit, are not materially different from those to which the old Roman road would lead; but there are so many ingenious and painful divergencies made in order to avoid the beaten track, as to puzzle a cosmopolitan jurist to comprehend how he and his English friend ever reached the same terminus together. With all the unfeigned respect and admiration which I feel for the law of England, in some respects not lessened but heightened by the bold independence and originality of its course, I cannot consider it as anything but a misfortune that her lawyers should deliberately cut themselves adrift from the stores of the most learned men of the most civilised nations in the world, and from results deduced on the most enlarged and philosophic views of the varied and possible relations of man to man. However able their jurists and however distinguished their judges, they could not fail to reap benefit by

being brought into contact with minds not less able, and with the systematic exposition of legal principle harmonised through the wide experience of many generations.

I speak on this question as a Scotch lawyer, remembering that I speak in the presence of English lawyers. Our Scottish system, apart from what it has borrowed from England, is simply a branch of the great European family. It has little which is indigenous. Principles and phraseology which sound strange in English ears would have been quite familiar in those of Voet, or Pothier, or Savigny. If the question were of the assimilation of our law to that of France, or Germany, or Italy, the task would be easy. It is true that we in Scotland feel most the inconvenience of the special and peculiar system which prevails the other side the Tweed, and great as is my desire to see the two systems assimilated, I only see one course by which that end might be to some extent accomplished, and it is one which to my mind has other reasons to recommend it.

Many years ago I sat as a member of the Statute Law Commission, the object of which was partly to provide for the abrogation of obsolete statutes, and partly to see whether those which were in full operation could be consolidated by new enactment. The Commission bore some fruit as regarded the first of these; but it had not gone far before I became persuaded that the second was substantially impracticable. Statutes which have been long the subject of judicial interpretation often become deflected from the original and primary meaning of their words, a result which it may be equally impossible to express in a new statute, either by the old words or by new ones. There is only one remedy for the voluminous obscurity of the Statute Book, although, as yet, lawyers are unwilling to allow or adopt it—I mean codification, a compendious statement of legal results, without regard to the steps by which they are reached.

I have no idea that we shall ever see so gigantic a work undertaken as a Code of the Laws of these Kingdoms. A Code, or a Digest, has been generally the work of an Arbitrary Government. How a Bill framed for this object would ever get through Committee in the House of Commons it is difficult to see. We should not, I think, attempt to commence on so ambitious a scale. But I see no reason why certain portions of the law might not be subjected to that process. Take, for instance, the Department of Mercantile Law. The law of bills of exchange, of insurance, of sale, and other more common contracts, might, without much difficulty, be separately codified; and in the course of that process it would be open to adopt what seemed the most

desirable provisions of either system, or of any system. Lawyers are apt to exaggerate the importance of what is termed legal principle. In many of the most controverted questions it is of little moment to persons who contract which way they are solved, provided they know how they are to be solved before they contract. I see in this direction, and this direction only, a way to extricate ourselves from the anomaly, a most inconvenient and serious one, especially in the smaller country, of having two systems of law applicable to the same mercantile community. I believe all that is needed for this work is a serious and practical commencement, and, if I may take the liberty of making the suggestion, I know of no work more suited to this Association for the amendment of the law than the preparation of a specimen Code on one or other of the subjects I have indicated. I should have more hope from the voluntary effort of a committee of this Society than from any commission which could be appointed. The specimen might never become law, but it would show lawmakers how it might be done. Doubtless lawyers would mourn over the loss of those cherished refinements by which their results were reached, and would chafe at being chained to a few peremptory words; but the gain to the public would be incalculable. In Scotland, especially, it would be great; for even when the law of England was adopted we should obtain the results, often most enlightened and salutary, without being weighted with the subtle, and sometimes questionable, reasoning by which they were attained.

I might find another illustration of the effect of social change in removing the apprehensions on which laws have proceeded in those which have sprung out of the fear or distrust of the people. To enter on the political phase of this question would be entirely beyond the province of my duty here. Yet the enlightened jurist will mark with satisfaction how social progress and the spread of intelligence have broken down the rough and coarse barriers which a ruder age set up against popular license, partly, no doubt, from a sounder view of public justice and experience, but partly also, and mainly, because the times have outgrown the danger.

One class of laws, which, to a certain extent, may fall under this category, I should have been tempted to enlarge on, but I find the subject too nearly allied to political feeling to do more than allude to it—I mean what are termed the Labour Laws, a subject which in the present day excites a lively and natural interest, and which is well worthy the attention both of the philanthropist and the jurist. It would not be uninteresting

to trace the progress of the laws relating to personal service, from the period when Gurth, the son of Beowulph, and Wamba, the son of Witless, bore round their necks the badge of serfdom, through the middle period of feudalism, to the present relations of employer and employed. No history could better illustrate the imperceptible and gradual but effective changes which time and progress have operated on the Statute Book; and here, also, the change has arisen, not from the supreme power, but from below—from the increased intelligence of a free and enterprising population. Even from years not so remote, the change from the harshness of the law, when some branches of personal service still retained the ancient fetters, to the more recent revision of the Combination laws, we can discern plainly the marks of social improvement obliterating the traces of obsolete distrust. These causes will still continne to operate. Controversies remain which I do not now stop to solve, or even to consider; but, affecting as they do a relation which is the broad basis on which national prosperity is built, they well deserve earnest and kindly consideration. But these are more economical than juridical questions. Their ultimate solution must rest in the good sense, prudence, and sagacity of those chiefly concerned. There are economical laws which are superior to any which are written in the Statute Book, and which are never violated with impunity. As in the material world we are told that every exercise of force operates a corresponding diminution of power, so in the relations of capital and labour everything which tends to diminish the security for the employment of capital finds its compensation, and that compensating element is sure to strike the weaker in the end.

Another class of laws are founded on fear of fraud; an element which runs through much of the history of the Scottish system, and a good deal of which still remains in it. I do not mean to question the soundness of the views on which several of these provisions proceed, on which probably Scottish lawyers might differ; but in some aspects of their operation they appeared in former times, and perhaps to a certain extent they appear still, to favour the principle, that it is better that twenty honest men should be cheated according to law than that one rogue should not succeed. Their tendency is to exclude the light for fear of fraud, forgetting that darkness may sometimes favour fraud, and that light may detect it. Thus the whole of that category of the Law of Scotland which limits proof to the writ or oath of the party seems to assume that the limitation is in favour of the interests of truth,

and that a wider inquiry into facts would lead to error and favour fraud. In instances in which this restriction takes effect only on the lapse of time—a period of prescription, it is reasonable. But in others it is more questionable. Thus trust can only be proved by the writ or oath of the alleged trustee, a law which had its origin in the troubles in the 17th century, when estates were conveyed from one to another of the family, as Cavalier or Roundhead had the upper hand. The allegations that property was truly held in trust became so numerous and so troublesome that the litigant alleging trust against an *ex facie* title was restricted to prove it by the writing or the oath of his antagonist. At that date, probably, the law was salutary, but the danger of these frauds has departed and has left the law behind it. So payment of money cannot be proved by witnesses, nor can want of value for a bill of exchange. In all these cases the only real position is, not whether, in some instances, proof by witnesses might aid a fraudulent design, but whether, in the majority of instances, the truth is best established by excluding or by admitting such testimony. As a general rule, I should think truth is more likely to be discovered by admitting rather than by excluding light.

The fear of an extraneous result, leading to legal provisions otherwise opposed to manifest justice, had its culmination with us in the rules which excluded the testimony of certain witnesses through fear of perjury *ob metum perjuriæ*. This was truly preferring the interests of the witness to the truth of the case and the interests of the suitor. It mattered not that the witness was individually above suspicion; that he, perhaps he alone, could establish the truth; still he was not permitted to tell what he knew, because, from his position, he might have an interest to speak falsely. The fallacy of this law is manifest, and the amount of injustice to which it led was incalculable; yet it is only since I and my contemporaries came to the Bar that it has been materially modified.

So much of laws based on apprehension or fear. I proceed to a second class, namely, laws resting on imperfect or exaggerated distinctions.

The first instance which naturally occurs is the distinction which prevails in England, and in English-speaking communities only, between law and equity. This is too obvious an instance of my general proposition to require me to enlarge on it. There is no distinction between law and equity, in any philosophical acceptation of these terms, for equity is the basis of law. Law divorced from equity is a monster which could

have no place in any system of jurisprudence. But the truth is that in England the distinction is not truly expressed by the nomenclature. It is not one between either the subject-matter or the objects of jurisprudence, but one solely of courts and jurisdiction; not what the right is or what the remedy should be, but solely from what tribunal redress can be given. It never could have arisen save from the jealousies of coördinate courts; and the distinction can only be arrived at by confining the terms within arbitrary rules which deprive them of their primary meaning. No other system, ancient or modern, ever made such a partition, as far as I know. Recent legislation has attempted to terminate the reign of this anomaly, as far as theory goes; but there has sprung up around each of those divisions so strong a growth of distinctive principles and formularies, in the course of centuries of able administration, that it will take many years before the rival camps will effectually unite. Probably they never will until their mutual technicalities are merged in a code.

It is more in accordance with my present object to refer to a very familiar and well-recognised distinction which prevails in all European jurisprudence—I mean that between real and personal property, or, as we should call it, between heritage and moveables.

Of course the distinction itself is not imperfect. There is a perfect distinction between that which the owner can carry about with him and that which in its nature remains fixed. To some extent also this natural and physical distinction must vary the forms of transference and the evidence and nature of title. But we are apt to forget, from long familiarity with artificial consequences of the division, that beyond this there is no philosophical distinction at all. Reasons of State or social policy or expediency may have created variations, but these must rest either on their own intrinsic utility or on the effect of ancient usage and tradition. These are mainly to be found in the forms of transfer, including attachment for debt and the rules regulating succession.

I see by the report of a discussion which took place at the recent meeting of the British Association that our distinguished countryman, Sir George Campbell, maintained that rights to land were not absolute but limited rights, in the person of the proprietor. Historically, Sir George Campbell was quite right. In all the feudal countries the land was the property of the Crown, by right of conquest, and while these were obtained by subjects, by grant from the Crown, the Crown remained the landlord, while similar subordinate rights might be created by

the Crown vassal, all depending on the inherent right in the soil vested in the Crown as universal superior. From the very superficial acquaintance I have with the land-rights of Hindostan, I should be inclined to think that, in many districts at least, the ancient tenure was strictly feudal, and answered as nearly as might be to the Crown vassal, sub-vassal, and cultivator with us. So far as land, from its nature, admits of separate and limited interests in it subsisting at the same time, this is a peculiarity inherent in the quality of the right. But in other respects the characteristics of the feudal relations in it are purely adventitious and artificial, not attaching to the subject of property, but to the mode of acquisition, and the extent and interest in the property which is acquired. But is not this one of those distinctions which time and circumstances have reduced to a shadow; so much so that in England the substance of it has long vanished, and the very memory of it has perished, save in a very few surviving and exceptional traces? The proprietor is no longer a *locum tenens* for the Crown or for the public; he is simply proprietor.

The purely feudal forms have lingered longer in this end of the island, but they have remained only as a very scientific and logical system of conveyancing, and, coupled with the thorough system of Registration of Deeds which our lawyers have always considered the bulwark of our law of real property, afford as secure and complete a series of titles to land as any country possesses. The fear of publicity, arising from our Register of Deeds,—an element I might have included under the former head, has never disturbed the spirit of the lawyers or landowners of the north, nor do I believe that any nation which enjoys a complete Register of Deeds ever found the slightest element of inconvenience from this source to qualify its immense advantages. But the old forms were cumbrous and expensive, although precise and secure. When I addressed this Association thirteen years ago, I find, from the draft of the observations which I then made, that I had intended to express the opinion that the time had come when these feudal forms might be entirely abandoned; but on reflection I thought the proposition too sweeping, and simply indicated an opinion that the juridical mind was not yet ripe for the change. But time and public opinion and the greater courage of my successors have brought about a great and most salutary advance in this direction. I was, and am still, of the mind that the thorough measure proposed by Lord Young might, as regarded its broad lines, have been adopted both with safety and with benefit.

Still I view with satisfaction the important measure, modified as it is, which was passed last session in the hands of the present Lord Advocate, and I consider it a valuable instalment towards the simplification of rights to land. While, however, much may still remain to be done in the simplification and cheapening of the transfer of land—a subject my limits will not permit me further to discuss—I have no idea that any amount of legislation in that respect will ever have the effect of extending the property in land to the less wealthy classes, or of assimilating its transfer to that of personal property. What may be done in a new country, in which the value of land is inconsiderable, is another matter; but with us, among whom the value of land is rising every day, the nature of the property itself, and the old traditions and instincts of the country, will always require, in the forms of the transference of land, an amount of care and security not appropriate to personal property. It is not the expense of acquiring or transferring land, but the expense of holding it, which prevents the larger diffusion of this species of property—not the laws of the Statute Book, but those of political economy; and nothing but sumptuary laws entirely irreconcilable with the freedom of trade could prevent this result. As long as the return from land is less than the ordinary return from capital invested in trade or in ordinary marketable securities, the man who can afford to hold it at a sacrifice of income must necessarily exclude the man who cannot; and no diminution in the cost or difficulty of transfer will have the slightest effect on that necessary consequence.

While, however, I doubt if it will ever be practicable to place the transfer of land on the same footing as that of ordinary personal property, there is one direction in which the distinction seems to be pushed to an extreme, and in which the law appears to be drifting into considerable confusion. The matter is somewhat technical, but in a large mercantile and manufacturing community, such as that in which I now speak, it has some features of considerable importance. I refer to the law relating to accessories and land. From the traditional and ancestral right to broad acres to the property of a few spinning machines inclosed by old brick walls and driven by a steam-engine put up yesterday, and which may be taken down to-morrow, is a great transition. To extend the law of land-rights to a species of property as thoroughly personal in its own nature as a cart or a wheelbarrow seems a caricature of this legal distinction. No doubt proper accessories—things which are truly subordinate to the enjoyment of real property, and for that pur-

pose are fixed to the soil—may become real by accession. But when the building itself, the machinery, the moving power, are all parts of one machine, placed for the purpose of carrying on a trade or manufacture, and without the slightest intention of altering the nature of the articles, it seems to me to be an example of exaggeration to deal with these as if they savoured of reality or were anything but what they are, stock-in-trade. There are, I know, elements of convenience as well as of mischievous anomaly in the doctrine. It aids in the use of stock-in-trade as a fund of credit, while it seems to extend (I do not say it does) the law of primogeniture to a case to which it appears absurd to apply it. It is one of those parasitical subtleties to which I alluded in my introductory remarks.

Another adventitious or artificial result of this distinction exists in the law of primogeniture itself—the descent of the real estate to the eldest son in the absence of settlement by the owner. The abstract utility or justice of this state of the law—a remnant, doubtless, of feudalism, although probably much older, historically—I do not now stop to discuss. Its practical importance, while the power of settlement remains, is not of the magnitude which theorists frequently represent it to be. It seems to be one of those institutions so largely interwoven with the habits and associations of this country as, for the present at least, to be beyond the pale of controversy. Hardships it has, undoubtedly; but it has also fostered among the younger branches of landed families a spirit of enterprise and manly independence which has largely tended to the prosperity and power of the nation. What I have to say or suggest on that subject may be embraced under my last subdivision—namely, imperfect or exaggerated analogies.

Here also I take as my illustration a very elementary and universal analogy—I mean that which subsists, or is supposed to subsist, between a man's power over his property while he lives, and his power of disposing of it after his death. The analogy is imperfect on the face of it, however deeply bound up with our habits and instincts. The law of wills and settlements is an artificial, not a natural law. The main object and end of law is to enable a man, while he lives, to do as he pleases with his own, provided he do not injure his neighbour. But he cannot take his worldly goods with him when he dies, nor can he in any sense enjoy what he has left in the visible diurnal sphere which he has quitted. Why then, it may be asked, should the acts or expressions of the man while he lived be held to control the unforeseen, in which he can have no lot?

To this philosophy can but imperfectly reply. Instinct gives a reply which all nations and systems have more or less recognised; but, in dealing with this analogy, it is sometimes too much forgotten that the power of settlement or testamentary bequest is the gift of positive law, and rests in no respect on natural right.

There are two principles on which the privilege may be supposed to rest. One is a reasonable consideration of social expediency—that he who is best acquainted with the position of his own affairs, and the wants and necessities of his family or relatives, should have a pre-eminent voice in the partition of his goods among them after he has ceased to be able to provide for them himself. The other has its root in the clinging desire of the soul to have still some part in this transitory scene, the craving for posthumous power, whether in the goods or the name which he may leave.

Multaque pars mei
Vitabit Libitinam

was the proudest thought of the Roman poet; and the hardship of being compelled to quit all hold on what absorbed so much thought and interest during life sanctions the reverence with which we regard dead men's wills; nor has any system failed to follow the common sentiment of humanity. The power of making a will is as old as history, and I see from recent Oriental discoveries that we are now in possession of the settlement of no less a personage than Sennacherib, who, in terms quite in accordance with our own usages, and a brevity very little in accordance with them, leaves the whole of his personal succession to his son, Esarhaddon, who reigned in his stead.

Yet there are few countries in which jurisprudence has not to some extent qualified the analogy of the right of testing to a right of property, and marked the distinction between the perfect and the imperfect right, although the provisions of different systems vary. In France the owner cannot settle his real property, but all must be divided. In England his power of settlement extends to all his property. In the Thelluson Act, however, by which accumulation beyond a reasonable period is prohibited, the distinction I refer to is acknowledged. With us, until very recently, the power of settling real estate was nearly unlimited; but we have always acknowleged the justice of restricting the power of a father over his personal estate by certain specific rights in his children.

The power of settling real estate in this country practically reduces the law of primogeniture as regards proper land

estate within very moderate bounds, and, as I have already said, the rule is too firmly fixed among us to be open, at present at least, to question. The inconvenience of the law practically is much more felt in regard to those kinds of property for which it never was intended—house property in towns and others, which follow the soil by accession. Of these I have already spoken. While, however, I do not expect to see any alteration on this leading feature of the descent of land among us, I remain of the opinion, as I said on a former occasion, that the right of settlement should not go beyond the first donee: in other words, that it would be beneficial to all classes to see the power of entail substantially abolished. If this power had ever had beneficial results, they are all worked out long ago. I know no good which they effect. They retard the improvement of land, they impoverish the younger branches of the family without enriching the elder, they hang like a millstone round the neck of an heir in possession, they insensibly exaggerate what were molehills of debt until they overshadow the ancestral acres, preventing the useful application of the resources of nature and of science, in order that posterity may succeed and be crippled in its turn. It is, in my opinion, a mistaken policy. So far from preserving ancient families, it is the true secret of their destruction. I believe it will be found that a large amount of land in the hands of the great proprietors has descended from generation to generation in fee simple, and I am quite certain that where it is so agriculture and enterprise have left their mark.

I own, therefore, that I should like to see entails abolished, the power of settlement only remaining. Much has been done by the Rutherfurd Act in removing these evils. Something still remains to be done. There are, no doubt, some interests in expectancy under the old law so close that it may be right to consider them; but that is a mere matter of time and of detail, which presents no real difficulty in adjustment.

Short of entailing land, the power of settlement seems entirely reasonable. It is remarkable that those who think otherwise, and lean to a constant subdivision of land, have never proposed to put any restrictions on the absolute power of a testator over his personal property. Yet the right of legitim which we have borrowed from the Roman law has much more to recommend it than a perpetual subdivision of land. The highest development of the fertility of the soil can only be attained on a considerable scale. But there is no difficulty in the division of money, and I am inclined to think that on

the whole there is reason and justice in the law which secures to younger children a portion of their father's personal succession.

The last illustration I shall mention under this chapter of my subject has reference to charitable bequests—a subject of no small interest in the present day, and one which affords many examples of the truth of some of the principles I have endeavoured shortly to enforce. What are we to say of a mischievous or useless charitable bequest? The law protects it, and of course, while the law stands, must continue to protect it. But it is hard to say to which of the canons of useful or philosophical law it conforms. It is not adapted to the wants of the times, for the tide has ebbed from it and left it on the shore. There are no existing interests which it promotes, because, as it is mischievous or useless, it can promote no interest. The will of the testator is in some sense a mere phantom, for he has no present will. In many instances there is no reason to suppose that if he were here among us he would maintain his bequest for a moment. All that can be said is that the integrity with which the law invests such bequests is an operative element in the action and proceedings of men during their lives, and regulates the use which they make of their property, and that it would destroy their confidence in the law were their settlements liable to be disturbed. Nevertheless, in dealing with this question, while extremes should be avoided, and the intentions of the donors carried out as far as this can be usefully done, I find no legal principle, as I find no suggestion of reason, which should induce me to join in the remonstrances which arise at every attempt to turn such bequests into a fertilizing channel.

I had intended to have added to these remarks, as illustrative of the general views I have endeavoured to enforce, a few observations on public international law; but I fear I have already exceeded my appointed limits. I know, however, of no branch of jurisprudence of which it is more true that time has obliterated many of the ancient boundaries, and by altering the relations of the civilized world made a thorough revision of the received formularies desirable. International law is, of course, an imperfect branch of jurisprudence—having no supreme authority by which it has been prescribed, or can be enforced; and although founded, or professing at least to proceed on general principles of natural justice, yet resting in reality on convention or contract, express or implied. Who made these contracts, when were they made, and for what ends, or whether they were not rules imposed by the stronger, and sub-

mitted to, rather than accepted, by the weaker, how far the belligerent and neutral world has changed since the days of Puffendorf and Grotius, and what are the merits of the modern school of Continental publicists; wherein the true interest of this country lies, as regards the controverted questions of neutrality and contraband of war, and how far a nation is entitled to follow the course to which her national interest would incline, are questions of the deepest moment, which will probably assume larger proportions in the future. I cannot now stop to consider them, and must bring this address to a close, in the hope that what I have said, however superficial and desultory, may not altogether fail of its objects as introductory to the labours of this section.

Address

ON

EDUCATION

BY

THE RIGHT HON. LORD NAPIER AND ETTRICK, K.T.

IN the remarks which I shall have the honour of submitting to you I do not propose to contend for the cause of education. The cause is won. Nor do I mean to expatiate on the beauty or the benefits of learning; for the theme has been laboured and adorned by voices and by pens with which mine can never vie. It will be my humbler task to attempt a rapid, I fear a superficial, commentary on the phenomena of educational development as they are being gradually unfolded before the public view, making reference particularly to the interests of the working classes.

1. It may be that many of those whom I have the honour to address are the adherents of the principles of State and secular education in the elementary stage. Such would advocate the compulsory institution of official schools in every educational area with local control, local support, and Government inspection, prohibiting the practice of devotional and dogmatic teaching, which would be left to the ministers of the respective communions. They would introduce into England the Scotch system, retrenching the option of the Bible and the Shorter Catechism. The sympathies of this party I cannot claim, though I respect their convictions and recognise with some apprehension the powers which they may wield in future in support of their opinions. I may be permitted to avow my regret that it has not been found possible to attempt the elementary education of the English people wholly by

denominational and voluntary agencies, supported by grants in aid from the State, and by powers of enforcing attendance, but guarded by every possible provision for the rights of individual conscience and the maintenance of efficiency in secular instruction. It has always appeared to me that by such a system the religious belief and moral culture of the masses would have been promoted, that bonds of association and mutual dependency of a very high and sacred character would have been framed or strengthened, and that many local dissensions, local burdens, and administrative embarrassments would have been avoided. The plan to which I refer would, if practicable, have been conformable to the peculiar conditions of English society, furnished as it is with such vast means of action both of a spiritual and material nature, with religious zeal burning with equal intensity in various forms, with philanthropic enthusiasm exalted to the height of religion, with the accumulated bequests of centuries available for educational work, with a Church Establishment which could scarcely claim to be national or popular if it was not deeply identified with the teaching of the poor, with an aristocracy of birth and wealth which ought to seek their highest delight and honour in fostering the interests committed not by law but by conscience and usage to their charge.

I do not think it illusory to affirm that in this unique constitution of English life, which still exists substantially unaltered, there were forces competent to evolve and support an exceptional educational organisation if time had been afforded, and if the conscience of the country had been deeply stirred in this direction. But I admit at once that the scheme of universal voluntary agency is dispelled for ever, that the machinery of the official board is an unalterable feature in the educational system of England, and that the question which survives is simply whether the existing compromise is to endure under which voluntary and official forces are invited to work side by side, or whether the official method is to supplant the other and attain an exclusive ascendency? The general temper of the country appears to me to point to the expediency of conciliation and mutual assistance. The country has spoken in tones which cannot be mistaken. The lines which have been laid down for educational progress are for the present to lie undisturbed. They are not to be lifted for the benefit of any party or any opinion. Certain rules have been sanctioned, certain agencies have been instituted. The impulse under which this effort has been made is expended. The nation has sown the seed, and is contented to await the harvest. The agitation of first principles, the discussion of conflicting systems,

the advocacy of organic innovation would be uncongenial to the moderate and practical spirit of the period. We have fallen upon quiet times. The party of voluntary effort seems, on the other hand, to be in no degree daunted or depressed. I trust that they will soon accept the resolutions of the Legislature of 1870 in a resigned and even in a friendly spirit; that they will recognise within the limits of the Act for Elementary Education the opportunities and means of exertion and influence in new forms, but they will certainly not desert that portion of the field which is left open to their exclusive occupation.

The financial statistics of the denominational organisations have, at this moment, a peculiar interest and significance, and they appear to indicate a remarkable elasticity. I find that the aggregate amount raised by voluntary contributions for the support of elementary schools has increased from 277,760*l.* in 1864 to 539,502*l.* in 1873, and that the most considerable increments have occurred in the most recent years. Nor is this development of liberality at all restricted to the Church of England. In the decennial period alluded to the Anglican subscriptions have nearly doubled, whilst those to neutral and Nonconformist schools have more than doubled, and those to Roman Catholic schools have increased threefold. The movement has been strengthened, not retarded, by the Act of 1870; nor is it the work of any particular class in the several denominations, for the number of subscribers has increased in about the same ratio as the amounts of subscription, and there is an increase in all the categories of donors, great and small. So natural, indeed, is the voluntary system to the English character, that the School Board schools themselves have begun to possess attraction for contributors; charity extends her hand to taxation, and the rate schools which, in 1872, received 20*l.* from endowment and 535*l.* from donations, obtained in 1873 515*l.* under the first head and 3,594*l.* under the second. The contributions towards school buildings are not less expansive than the annual subscriptions. In the four years ending on the 31st of December 1873, 1,429 new or improved voluntary schools, affording accommodation to 225,574 scholars, have been opened, in connection with which Government grants of 252,935*l.* have been met by voluntary contributions of rather more than one million sterling. That the quality of education afforded in voluntary schools moves *pari passu* with the amount of their revenue and the increase of accommodation is demonstrated by the fact that the number of schools seeking Government inspection for the first time rose from 500 in 1869 to 1,530 in 1872, and to 1,800 in 1873.

Voluntary effort, which has so large a part in the direction of elementary instruction in England, undertakes under Government impulse the regulation and support of the whole of the training work for teachers. The forty-one training colleges under inspection in England and Wales are affiliated to religious denominations or subordinated to religious influences. It would, of course, be idle to attribute the whole credit of these admirable institutions to the action of the voluntary principle. Without Government grants many would no doubt cease to exist; without the stimulating and harmonising power of Government inspection several would feel the relaxing effects of isolation and obscurity; while all would move in imperfect concert with each other, and with the educational wants of the community. But it would be difficult to overrate the advantages derived by our training institutions from the motives of those who have been associated with their foundation and management, or the effect which the co-operation of religious agency must exert in refining the character, awakening the conscience, and inflaming the zeal of the teacher.

If it is true, as I think I have ample ground for alleging, that voluntary effort is a living, useful, tenacious power in the English scheme of elementary education, and if both the political accidents of the time, and the more durable influences which pervade the frame of English social life, favour its efficiency and duration, I venture to contend that it is the duty of all parties truly concerned for the common interest to recognise the fact, and to co-operate with the view of investing this agency with the prerogatives for good which are placed exclusively at the disposal of official establishments, the rivals, but I trust not the adversaries, of voluntary effort.

Three things go to form a good elementary system—good accommodation, good teaching, and regular attendance. Turn where we will the same deplorable fact meets our eyes—defective attendance is the capital danger against which we have to strive—a danger which reason and the experience of other countries alike prove to be the besetting difficulty of a free and industrial community. There will be no lack of accommodation. A year ago there was in England school accommodation already for 2,582,000 children in efficient schools, and 3,300,000 places would supply all our wants. Since then, no doubt under the instigation of the Department of Education, the action of School Boards, and the exertions of voluntary agency, accommodation has greatly multiplied. But the space for 2,582,000 children secured a year ago was poorly occupied by an average daily attendance of 1,482,000

pupils, leaving the area for 1,180,000 empty. Our money and our pains are cast away. We are expanding vacancy. The question of teaching power offers no ground for anxiety. There will be no want of teachers. The training colleges, without counting other sources of supply, can produce 700 masters and mistresses annually with progressive qualifications, most of whom have had previous experience as pupil teachers, a number which is reported to be equal to the necessity. The factory is built, the machinery is set up. The material alone is wanting. Well may the Education Department in its last report remark 'that earnest efforts will have to be made by every available means to secure and enforce the attendance of children at school, as the sole condition on which we can expect that the labours of the past few years will meet with an adequate return in the improved instruction of the labouring classes of the community.' It would have been consistent and satisfactory if these expressions had been followed up by some distinct suggestion for the extension of the compulsory power, and an indication of the authority with which that power should be deposited where School Boards do not exist. No such suggestion is, however, introduced. We are dismissed, in a subsequent paragraph, with the expression of a half-hearted hope that 'the various Acts for regulating the education of children employed in labour will enable us, as years go on, to report a large increase in the attendance of scholars, and a gradual improvement in their attainments.'

I apprehend, gentlemen, that the country, even in its present temper, will scarcely be satisfied with an attitude so patient and expectant on the part of the Committee of the Privy Council. Indeed we must not judge the Committee itself upon isolated terms, which, no doubt, are but an imperfect embodiment of the sentiments by which it is animated. The public mind is ripening to the conclusion that the interests of education should not be subordinated to the supposed requirements of labour, or rather that the two interests should not be weighed with nice and scrupulous solicitude one against the other. I trust that the maxim that a certain standard of instruction shall be an indispensable preliminary to wage work in the case of a child will be soon as much admitted as the maxim that the labour of the child must be restricted as to its nature and amount, and that the attainment of the standard prescribed will be enforced by compulsory attendance everywhere, the compulsory power being introduced with caution and applied with firmness. It is singular with how much inconsistency this subject is treated, with how much timidity it is approached,

when the rural districts of England are concerned, even by those whose zeal for education is unquestioned. In England bye-laws for enforcing the attendance of children at school have been sanctioned on the application of School Boards in areas which contain an aggregate population of 9,442,000 souls. Forty per cent. of the whole population and seventy-eight per cent. of the whole urban population have embraced this regulation. In Scotland the system is universal as far as physical circumstances will allow it. Yet many shrink from the admission that what is practicable in the town is practicable in the country, that what is good for all Scotland is good for all England too. The argument which may be deduced from the example of Scotland is particularly cogent. In Scotland the farmer might represent that rents are higher, that labour is dearer, that the co-operation of the young would be most important in the fields. The pupil might plead that the way is longer and the weather worse. The parent might urge that the accessory wages are of no less account in the northern than in the southern household. The State would, however, turn a deaf ear to such remonstrances, and the moral interest would prevail. But touch the offspring of the English rustic, and instantly there is a clamour in high places for the hay, the hops, and the harvest, and every cereal becomes more important than a child.

No one who is familiar with the rural conditions of England can doubt that there are many parishes in which the intervention of a Board would be productive of discontent, and in which the imposition of a rate would be superfluous and unpopular. In those very localities there will often be found a warm desire to diffuse the benefits of education, to accommodate and adorn the school with every appliance and accessory which can render it efficient and beautiful. The law in such cases gives free course to voluntary effort, and gives it encouragement and aid. The law should do more. It should impose on voluntary agency the obligation to do its part thoroughly, and if it aspires to educate, not only to educate well, but to educate all—all within the bounds which it claims to fill, within which it deprecates and resists the institution of official agency. Wherever there is an efficient elementary school with commensurate capacity and the due guarantees for the rights of conscience, on whatever basis it may be founded, means should exist for sending the ignorant and neglected in.

The application of the compulsory power in connection with efficient schools where no School Board exists, and where the institution of a School Board would be undesirable, opens a

question difficult of solution—I mean the selection of agencies to which the introduction of compulsion and the enforcement of attendance could be safely entrusted. The introduction of compulsion in connection with voluntary agency could not be sudden and could not be general. It must be found on careful inquiry into the condition and circumstances of every parish separately; for it is obvious that not only the efficiency of the school must be considered as a teaching agency, but also the character of the managing body and the temper of the community among which and for which that body works. With due deference to the opinion of others more capable of judging than myself, I must avow my belief that there is no authority to which the introduction of compulsion—I mean the power of declaring that attendance will be enforced—could so safely be entrusted as to the Committee of the Privy Council, acting upon the report of an inspector. No public body is more impartial, none is better informed, none is more zealous with discretion. Nor can it be affirmed that such a power, vested in such hands, would be exorbitant or unexampled, for if the Committee can enforce the election of a School Board, it might surely enforce the attendance of a child. My proposal is, that when the inspector is satisfied after due inquiry that the school attendance in any parish is defective, and that the existing voluntary schools are efficient and acceptable, the Committee of the Privy Council should on his report have the power of proclaiming that parish to be under the compulsory rule, exercising in that respect the prerogative of a School Board. The Education Department, which would be competent to bring the parish under the rule, would not be competent to prosecute the parent who disobeyed it. This duty would involve a sustained and detailed interference in local matters which the central authority could not undertake, and some other agency would have to be created or empowered for this purpose. The Education Department, it has been suggested, might nominate in such localities an education board, composed it might be of members of the Board of Guardians, of members of the Local Committees of School Management, and of other persons enjoying the public confidence and interested in education, who would be charged with the duty of enforcing attendance, and of levying or applying a rate for the expenditure incurred in prosecutions. To me it appears that the multiplication of authorities and boards is an evil which should be avoided, and though the Board of Guardians would probably not be as good an educational council for the parish as might be constituted from other materials, it exists, it is partly

elective, it is a familiar and recognised authority, it levies rates, it might be compelled to act on the requisition of the Education Department, and if invested with functions and obligations connected with education, persons would probably be found to serve upon it who had this interest particularly at heart.

Another argument appears to me to recommend the Board of Guardians for this object—I mean the fact that the Board of Guardians is the rural sanitary authority, and might, in virtue of this feature in its constitution, be most properly furnished with those powers of sanitary inspection and control in schools which are most desirable, and which do not at this moment, as far as I know, exist in any quarter.

At this point in my argument I may, perhaps, most conveniently advert to a matter in which the mixed and flexible machine for elementary education which we possess, and which I desire to retain, discovers a serious defect—I mean with reference to the numerous class of schools recognised as efficient, but not availing themselves of regular Government inspection. If the rule of compulsory attendance is gradually rendered general, it can only be enforced and made acceptable to the people in connection with a large share of liberty of selection on the part of the parent. We may possibly insist on attendance in efficient schools, but we could not insist on attendance in inspected schools. A certain number of schools have been officially recognised as efficient; if these schools are to have the benefits attached to compulsory attendance some provision should exist for ascertaining that the measure of efficiency with reference to accommodation and teaching which justified the original recognition of such schools is maintained. It might be too much to affirm that the School Board where it exists, or that the Board of Guardians, acting as an Education Board where there is no School Board, should have the power of inquiring, by direct local agency, into the condition of private elementary schools, and of determining whether they should be retained on the efficient list; but it would not be unreasonable to give the School Board and the Board of Guardians the power of invoking the action of the Government inspector in cases in which they had reason to suspect the deterioration of a school. The report of the inspector would decide whether the school so dealt with should be retained in the class of efficient schools.

Let me urge once more that the extension of the rule of compulsory attendance is the object to which our combined energies can be applied with the greatest justice and usefulness, and with the best prospects of success. It is a ground upon

which all parties can unite—a measure which a Conservative Government can adopt with consistency and safety, for it is an advance, not an innovation—the logical, irresistible consequence of what has been done, of what is being done with increasing vigour day by day.

If in advocating this course I have brought into prominent view the claims of voluntary effort, I would not have it thought for one moment that I am blind to the merits of official agency, or to the shape which it has irrevocably assumed in the prosecution of primary instruction in England. A member of the Metropolitan School Board myself, and deeply interested in its operation, I can bear testimony to the spirit by which its proceedings are governed. Voluntary agency has no monopoly of conscience or benevolence. The School Board furnishes an arena for party or sectarian aspirations and resentments, but the results must not be judged by the fugitive aberrations of public discussion. Our very School Boards are, in one sense, voluntary agencies. The members of these bodies at least are voluntary, unremunerated, disinterested servants of the public, and often act with the cordiality of a spontaneous vocation. After the conflict of words and votes is over, the adherents of opposite principles will join hands and hearts in the performance of common duties. I hazard nothing in asserting that few ministers of religion can be more animated for the good of souls, no landlords can be more concerned for the welfare of hereditary dependents, than are many of the gentlemen with whom I have the honour to act for the good of the people and the poor of London.

Till within a recent period there was nothing in the institutions of Scotland to which the national belief clung with greater affection than it did to the old Parish School system. Certainly when, some forty years ago, treading in the footsteps of so many of my countrymen, I left a wild land of green pastures, foaming streams, and theological shepherds, where every simple feature of actuality had received the magic touch of legend or of song, I carried with me the illusion that every Border peasant received with his plaid the talisman of a good education, to be used or dropped on the road of life as fortune or as will decided. And indeed the impression was strongly countenanced by the remarkable force of character which the labouring people commonly discovered, and by the conspicuous examples of distinction which reflected lustre on their ranks. Yet even then the people had silently outgrown the educational harness of their forefathers. First, in the towns and villages the impression became accredited that the old

teaching was of small avail, for new forms of industry had drawn multitudes together. In the rural districts numbers, indeed, had not increased, but inquiry showed that existing means, though invigorating and effective when used, could not cope with the difficulties of distance, the temptations of labour, the occasional indifference of parents, the depressing influences of poverty. When the truth was proved and felt effort and remedy were not wanting. The Church, the public, and the Government came to the rescue. In a single generation the agencies of voluntary subscription and State assistance more than doubled the venerable but slender patrimony which the Reformation had bequeathed for the mind of Scotland, with the addition of the scholars' fees. Turning to the tables published in the Report of the Committee of Council for 1873–4, the total income of the inspected schools of Scotland appears to be 311,553*l.*, of which 166,964*l.* are derived from the public and the State. The effort was honourable but insufficient, the disease constantly outstripped the efforts of the physician, and those who would convince themselves of the extent to which educational destitution or infirmity prevailed in Scotland at the time of the passing of the Act of 1872 will find a striking picture of its necessities in the first annual report of the Board of Education, which has been recently distributed. There, and in the contemporaneous Report of the Committee of the Privy Council, the fond traditions of the Nationalist co-operate in the crucible of statistical analysis. It is not my purpose to increase the aridity of this address by constant reference to figures. The facts can be compendiously stated in general terms. There is a great need of additional schools not only in the seats of commerce and industry, but in agricultural and pastoral parishes. School buildings are sometimes dilapidated and ruinous, notwithstanding the imperative prescriptions of previous laws, and they are often unprovided with indispensable accessories. An imposing proportion of the population of school-going age appears in the census as receiving instruction of some sort or other, but the percentage of children in regular attendance at efficient schools is unsatisfactory, and of those who do attend but a small proportion are presented for examination in the standards appropriate to their age. To these deficiencies, which are apparent in all parts of the country, we must add difficulties and discouragements peculiar to the desolate regions of the Highlands and Islands, where the homesteads are either so thinly scattered that the child cannot obtain access to the school, or where the rateable value of property is so small that schools cannot be supported in numbers sufficient

for the population. The task of reconstruction—I may say of regeneration—is neither simple nor light; but everywhere the work has been commenced in its new forms, if not with unanimity, at least with spirit. Voluntary effort, which was in England the basis, has always been in Scotland an auxiliary. It was evoked for an emergency which can in future be met by other means. It seems probable that this agency is destined to be suppressed as far as the common elementary school for the wage-earning class is concerned. The mass of the people interested in the constitution and conduct of these schools is of one mind in regard to the dogmas of religion, the forms of worship, and the frame of church government. The middle and lower classes of the Scotch accept the same formularies of faith and piety, and seem determined to use them. They belong substantially to one religious group. The proprietary classes belong to a Church which has no popular adherence. It is certain that many have not abandoned the exercise of traditional authority and the performance of traditional good offices in connection with the parish schools without regret; but the intimate ties which in England connect the landlord with the Church, and through the Church with the teacher, have no existence here. Under these circumstances the rate will be easily and naturally substituted for the rent charge and the subscription, the auxiliary buildings will be transferred to a common stock, and a powerful uniform educational machine will be consolidated, possessing a strong denominational character, and possessing it without offence.

In the year 1873, 415 schools of various origins were already transferred to the newly-formed Boards, and if many more were not conveyed in the same manner, it was owing to legal not to social or religious impediments. Under the impulse given by the Act of 1872 schools will be improved and multiplied, the exercise of the compulsory power will fill them, and the new Code for Scotland, which deserves the attentive perusal of Englishmen, will offer incentives to higher studies in the humblest classes. The exceptional position of the Northern counties will necessitate the extension of Imperial aid, the institution of smaller rate schools than are sanctioned elsewhere, and the introduction of a system of itinerant teaching. Scotland will hereafter exhibit in regard to popular instruction the methods which belong to self-governing communities with the results which have been attained under administrative centralisation, the freedom of America with the discipline of Germany. I would, however, venture to recommend to the consideration of my countrymen two objects for which they

ought to strive, which seem necessary for the completion and the security of the system, one of a moral, the other of a national character—I mean the better organisation of infant instruction and the settlement of a permanent Educational Department in Scotland.

When Scotland was a poor agricultural country with a scattered people it could dispense with the infant school. The home was the school; if not a school of letters, often a school of religion, of morals, of labour, of mutual help, of mutual affection. The family bond was not dissevered. The father went abroad to his work. The mother kept the house. The house, poor as it was, was still the scene of a variety of desultory domestic work. The cow, the kitchen, the kail yard, the spinning-wheel, the hand-loom, kept the inmates busy. The door was never locked, the hearth was never cold, the child was never left, or if left, it ran wild in rain and shine, with more benefit than harm; it ran out to the heather or the burn; the bosom of Nature was still comparatively pure. The factory system has altered the scene and the old family ties. The rural mechanics have disappeared; even the farm labourers diminish year by year. More than two-thirds of the population live in villages, towns, and cities. Everything is bought; nothing is made at home. Where there was a moor there is a market, and the gutter follows the course of the brook.

How far under the present factory laws family life is suspended I cannot affirm from personal observation. It has been my fate to live with every people except my own. But it is certain that mothers and sisters, as well as fathers and brothers, have their fixed and regulated avocations away from the lodging and apart from each other. More or less the child must be left alone, and left with physical if not with moral evil. It is not wise to glorify and regret the past—it would be criminal only to denounce the present and despair of the future. The social changes which we have undergone were inevitable and resistless, and every form of social evil has its remedy. The remedy for the daily dissolution of a home lies in the daily formation of the *crèche*, of the nursery, of the infant school. The substitutes may not in all respects recommend themselves to our judgment, but they are indispensable. They are the only substitutes, and they carry many consolations and many blessings with them.

A reference to the educational statistics of Scotland shows how little the infant school has taken root—how much we have to imitate from England here. In England the school years are counted from three to thirteen; in Scotland from five to

thirteen. In England the most numerous section of a school is the infant one; in Scotland it is the least numerous. But the formation of infant schools is not only necessary for the safety, morality, and recreation of the child, it is necessary in order to lay an early basis of that intellectual education which is, unhappily, destined to terminate far too soon. Education in Scotland often only commences at six. It is not surprising that pupils at ten, or even at twelve, are presented for examination in standards which would be more appropriate to seven or eight. The development of the industrial system, the increasing demand for labour, and especially for the labour of the young, renders this question most urgent, and the Scottish platform of elementary teaching will not be comprehensive and complete unless it is enlarged in this direction.

The elementary education of Scotland, like its industrial and technical education, is under the supreme control of the Committee of the Privy Council on Education, which includes a Committee specially appropriated to education in Scotland, termed in the Act of 1872 'The Scotch Education Department.' The Act of 1872 has prescribed the establishment of a Board of Education for Scotland, the place of business of which is in Edinburgh, and the functions of which lapse to the Scotch Education Department at the termination of three or five years, at the option of the Crown. It is not desired, and it cannot be expected, that the education of Scotland, drawing, as it does, large grants in aid from the Imperial revenue, should be made independent of Imperial control. The Committee of the Privy Council on Education is the imperfect but progressive representation of a Ministry of Education for the United Kingdom. It is responsible for the appropriation and employment of funds voted by Parliament for this branch of the public service. Such a power must exist, and its functions may not only be useful in preserving a certain proportion and equality in the march of education in the two kingdoms, as far as that depends on the grant system; but the Department may, from its elevated standpoint and superior sweep of observation, even do good in the way of practical suggestion and regulation for each. The Board of Education in Edinburgh and the Department at Whitehall may not always have moved in perfect harmony of opinion; but I observe in the report of the former a candid recognition that in a matter of detail, in a question of bonuses applicable to various forms of proficiency in school classes presented for examination, the proposals of the Scotch body had been expanded and improved by the Committee of Council, by the introduction of provisions favourable to Scotland, which were

not at that time in the English Code, and are probably not there now. It is far from my design to present the Scotch Education Department as a hostile authority; on the contrary, that authority is not only indispensable—it is wise, and friendly too. Yet still, in my judgment, the preservation of a subordinate but influential Educational Board permanently in Scotland would be of considerable importance.

The educational institutions of Scotland have in every stage a deep stamp of separate nationality. The constitution and physiognomy of the Universities are radically different from those of England. The middle class and borough schools have peculiar features with reference to revenue, management, and teaching. The public elementary schools have a distinct type and a distinct code. These differences are not recent, and not artificial. They are ancient, deeply rooted, springing from theological and political developments which have grown up apart. The Scotch system and the English system have each their merits, and each may borrow here and there with benefit from the other, but each should be allowed to expand freely on its natural and appropriate lines of growth. Years must elapse before the Act of 1872 can be carried into full operation in every part of Scotland, before the moral wilderness in some parts and the physical wilderness in others can be occupied and subdued. On the present initiatory stage there is a constant necessity for inquiry and conference, and this necessity is met by the existence of the Board in Edinburgh. But will the necessity cease with the initiatory stage? I think not. An educational system is a ceaseless growth which should be shaped and guided by the ever-varying wants of localities and times. The School Boards of Scotland will be vigilant and judicious. I do not doubt it. But some will require instigation, and some will require restraint. There ought surely to be a congenial accessible authority superintending their deficiencies or excesses to which they may carry their difficulties and desires, which may solve their doubts, further their applications, and allay their resentments and disputes. The supreme authority in London is too remote, and may itself require local advice in dealing with questions peculiar to Scotland. Far from thinking that the office in Edinburgh should be closed, I think that it should be continued and provided with greater powers. It ought to be an intermediary consulting authority, through which the communications of local bodies and the reports of the Scotch inspectorate should pass on to the Committee of the Privy Council, and through which the decision of the Committee should be transmitted in

return. The sentiments of the people would be gratified and their interests in educational work would be stimulated by being placed in close and permanent contact with a National Board of Education.

II. Next to elementary education, which is the common basis of intelligence and culture, the most important branch of instruction in an industrial State is that which governs the application of science and art to industry, which aims to attain cheapness, abundance, good quality, and good taste in national productions.

It is satisfactory to find that the attention which has been enlisted on behalf of primary teaching since 1870 has not impaired the solicitude of Government for technical instruction. Between the years 1870 and 1874 there has been a steady increase in the number of Science Schools in connection with the Science and Art Department of the Privy Council, or, more properly, of the number of schools in which science teaching of some sort is given; the number of pupils has increased in due proportion, and the proficiency attained has been progressive, as proved by the number of papers passed, the number of first classes, and the number of students attaining honours. This improvement is, however, most apparent in England. Mr. Wylde, in his report of inspection, distinctly states that in Scotland 'the number of classes and students remain pretty much the same as before.'

In the Art Schools, as in the Science Schools, there is an increase in the number of schools and in the number of students, there has been an improvement in the quality of the instruction afforded, and the co-operation of the learners is proved by the fact that in the total revenue of these establishments the amount derived from fees greatly exceeds the amount derived from subscriptions and Government grants united. The co-operation of the Department in the culture of the Arts is active and comprehensive. It stimulates the study of drawing in the Training Colleges for elementary teachers; it promotes the same study in public elementary schools; it affords grants in aid, and every species of encouragement and assistance to every department of Art study in the specific Art Schools. But in Art, as in Science, the Scotch do not obey the impulse given by Government with the same alacrity as the English.

For the benefit of Science and Art alike in their connection with industry and general intellectual culture the Department incessantly embellishes and enlarges the South Kensington Museum, already the most extensive, accessible, and profitable repository of art objects in the world, while it affords to a number

of Exhibitions, Museums, Institutions, and Societies in various parts of the country pecuniary support, loans of works of art, and countenance and counsel of an invaluable character.

In this expansion of Science and Art teaching there is no doubt much to command our approval. I need, however, hardly say to my present auditory that we are not deceived by the imposing summaries of statistical returns. When we are told that the total number of persons who received instruction by teachers or lecturers in connection with the Science and Art Department in 1873 was 356,000, the combined results of official and voluntary effort appears immense, but the simplest analysis of the numbers taught and the instruction given discloses facts which qualify our satisfaction. The reports of the inspectors under the Department are the unsparing exponents of the truth. The system of instruction in Science Schools is often desultory, the teachers are often inefficient, the system of payment by results prompts the premature presentation of crowds of candidates; traces of teaching the memory and not the understanding, of preparing for examination and not for use, are apparent in many quarters. We are imparting superficial transitory knowledge to multitudes under the influence of one-sided enthusiasm and pecuniary inducements. This system must surely have unfavourable results both on the teachers and on the taught. Take, for instance, the movement for technical teaching. The total number of individuals learning drawing, painting, or modelling through the instrumentality of the Department is more than 290,000, but of the number more than 237,000 are children taught in elementary schools. Are we acting wisely in sanctioning this multiplication of tentative and superficial instruction? It is seriously proposed that drawing shall be taught in every public elementary school and to every child. I deprecate what I deem to be a premature and extravagant extension of a thing in itself good. It is a serious matter to impose a new branch of instruction in elementary schools, while under the bye-laws of School Boards children are permitted to give up school at ten years of age if they have attained the fifth standard, and while intelligent reading is still an almost universal desideratum. Art teaching, if it is not to be a mere imposture, carries with it onerous obligations as regards the child, the public, and the teacher. It occupies time, it requires apparatus, it requires accommodation, it demands exceptional aptitude on the part of the master and mistress, which may not be found in connection with other estimable qualities, and which may be found without them. And, after

all, a knowledge of drawing is superfluous in a number of instances, perhaps to a majority, in the classes which come to elementary schools. At any rate let us move with circumspection. Let us secure and consolidate certain results before we march forward to experiment and discovery. Let us first teach the common elements of knowledge in rational and indelible forms. When our children are discharged from school capable of reading a common book with ease and pleasure, of writing a common letter of business or duty, of working a useful sum, with some knowledge of the past from which we issue and of the world in which we live—when these acquisitions can be deeply engraved in the memory and placed in the service of a disciplined intelligence, it will be time to think of universal technical instruction. The Science and Art Department ought, in my humble judgment, to aim at compression, not enlargement; to select and elevate, to attempt excellence rather than universality.

Turning from the question of simple technical teaching in elementary schools to the specific Schools of Art, which are more directly bound up with the industrial interests of the country, I do not say that they are too numerous; but I wish I could find in the reports of the inspectors that they are efficiently organized for the high purpose to which they are devoted. That they are progressive in England is undoubted, but they move forward slowly, and under some discouragements. The deficiencies in our Art School system are traceable to two causes—inefficient teaching and inefficient support. The want of efficient teachers is avowed by the Science and Art Department; but it is a want which can be certainly supplied. The National Art Training School commands a large area of selection and incomparable facilities for instruction. It would quickly form teachers in sufficient numbers and of unquestionable competency for the Schools of Art if the schools would remunerate and retain the teachers. The question of maintenance is really the only difficulty. It is entirely in the hands of the community. The Government will do its part, but in conjunction with local effort. The Art Schools cannot be made efficient without a generous provision for accommodation, apparatus, and models, for permanent instructors, for occasional lecturers, for the exhibition of art objects of a high class, for the institution of bursaries to enable the best students to complete their education in the centres of artistic life. In all or many of these particulars our Schools of Art are meagrely provided. The benefactions of the rich, the co-operative subscriptions of the poor, are alike needed, and they

would provoke a liberal response on the part of the Science and Art Department.

I have observed that the Schools of Art in Scotland are in a stationary or retrogressive condition. Of the ten which exist and are reported on by the Department, six are in one respect or another declining, four only show signs of improvement. There is no doubt, I presume, of the impartiality with which the incentives of the Department are meted out. We must, therefore, refer the stagnation of art teaching in this country to other than official causes. There can hardly be a defect in the national mind. From the dawn of civilisation in Scotland a sense of the beautiful was discovered in poetry, in melody, in building. It suffered long eclipses in theological conflicts, but returned with the warmth of reason, affluence, and peace—showed itself in the last century in the graces of prose composition, in landscape painting, in the revival of national song—later still, and down to our own age, by various excellence in the fine arts, in social refinements, in every shape of literary creation and culture. Nor can we accuse the sterility of nature or the poverty of the market. Nature has stored in the soil of Scotland for the most part the same materials for industry which abound in the southern kingdom, and where some may be deficient the powers of modern transport could fetch them in. The market at home and abroad is the same for both. Yet the industry of England is more closely allied to art than that of Scotland. The cause is simply this, that England was earlier in the field, that she possessed for a time some of those factitious advantages which were valuable once, but which now are comparatively inoperative. England had the residence of the Sovereign, the presence of the Art patrons, a form of religion more liberal and ornate, the earlier institution of academies and collections. While Scotland was still labouring to perfect her linen manufacture, England had already attained distinction in the fabrication of woollens, pottery, porcelain, lace, glass, decorative furniture, wood-carving, silk, leather, and metal work. The discovery of minerals, and that mighty birth of mechanical power of which Glasgow was the cradle, altered the physiognomy of Scottish labour, but did not adorn it. Scotland is still most renowned for works of utility and strength. She can supply the world with engines and with ships, but she cannot weave a yard of brocade, mould a statuette, or paint a china vase. In cotton fabrics and works of metal we do not go beyond mediocrity in taste, and the woollen manufactures which attain such an excellent quality

have, except in the article of carpets, been rather the vehicle of traditional patterns than of true art design. To add flexibility and elegance where vigour is now predominant would be a grateful and patriotic task. The exertion of some gifted mind, the dedication of some ample fortune, the sustained combination of care, thought, and liberality among the art lovers and lovers of their country, who are assuredly not wanting, would bear the fruits in Scotland which they have produced elsewhere.

In affirming the importance of industrial teaching in its higher stages I know that I expose myself to objections. It may be asserted that there was more taste in times when there was less instruction; and that if we compare the productions of those countries where technical education is most general with those countries where it is less practised, we do not find that the communities which are most taught work best. The facts may be admitted. Few who are familiar with South Kensington and Bethnal Green will deny that decorative fabrication was, in the 17th and 18th centuries, more careful, more delicate, more durable, more beautiful, and more inventive than the work which is done at present; and it is equally certain that the French far surpass in design and execution the Germans and Swiss, who make the greatest efforts for industrial training. But we must not admit that the modern forms can be set aside because former periods did without them. Former periods had their own methods, both of a coercive and stimulative character. The regulations of apprenticeship, the constitutions of guilds, gave thoroughness and stability to the practice of the manual arts. The Court, the Church, the aristocracy, the Government, created a market, limited in extent, but which could only be satisfied by work of the highest quality. Nor is it surprising that the extraordinary natural aptitudes of the French people, sustained by hereditary culture, and the most intelligent appreciation of style in the domestic customer, still give the artisans of that nation a decided ascendency over those of other races where the native genius is more stubborn, where technical instruction is recent and pedantic, and where the home demand is less opulent and discriminating. The Art School is the only substitute for the old forms of industrial training which the impatient spirit of this age would tolerate; and it is a valuable means towards the attainment here of that refined industrial culture which the French workman possesses in a conspicuous degree.

It would indeed be lamentable if any time were lost, if any means were neglected, for the higher education of English labour, for there never was a period when so many influences

conspired to give us confidence of success. I believe that I am not affected by national partiality when I assert that there is a vein of taste in the English mind superior to that which exists in other industrial communities, excepting France. The English mind is deficient in fertility of invention, in vivacity, in the conception of grace and movement; but it is not prone to what is fantastic, florid, laboured, and vulgar. I do not say that under the pressure of competition and the appetite for novelty there are not many examples of those vices in our productions, but they are not the natural growth of the soil. Compared with the productions of Germany, Belgium, and Switzerland, there is a temperate cast in the taste of England. Such was the character of our older manufactures, and it will never be difficult to restrain the English fancy within the bounds of harmony and reserve. With regard to executive aptitudes it will scarcely be disputed that the average standard of English work remains superior in solidity and finish. Notwithstanding the relaxation of the old regulations of industrial training, notwithstanding the facilities of locomotion and emigration, and the temptations to indulgence which might have tended to unsettle the working classes and impair their powers of application, the individual Englishman still exercises in the most arduous departments of labour a sustained energy which is unrivalled among his Continental competitors. The human agent is undegenerate in vigour and susceptible of the highest culture. If we turn from the British workman to the market for British industry, we find that it combines in an unprecedented measure all the advantages which belong to patronage with those which belong to popular consumption. It is favourable alike to quality and quantity; it never was so critical, and it never was so vast. You have concentrations of wealth in the hands of individuals animated by the love of art, by the love of their fellow-men, by the public honours awarded to deeds of munificence. You have the stability of property and family existence, by which men are prompted to the creation and acquisition of the most durable vehicles and sources of intellectual pleasure; you have a progressive municipal life demanding works of utility and splendour. You have opulent corporations connected with religion, learning, and trade, sometimes connected with nothing, the conservators of much that is lovely in the past, and the promoters in the present of much that is beautiful and good. That these venerable and brilliant features in our social condition are associated with defects and abuses I allow, but they constitute a fabric of society singularly conducive to the prosperity of the industrial arts, and any mate-

rial alteration of the institutions which we see around us would be followed by a decay in the beauty, if not in the value and abundance, of our national products. It may scarcely be expected that British productions in the category of art manufacture will obtain an increasing share of the market in those countries which are themselves industrial. Protective restriction and national predilection will give an advantage to the native producer, but the age is characterised by the rapid formation in vacant regions of civilised communities possessing great powers of purchase, and the love of luxury which attends the easy accumulation of wealth. These communities are invariably in a preponderant degree of English origin. Their first relations of traffic are often with England, their tastes and habits must involve some preference for British commodities. It depends upon the morality and vigilance of our capitalists, on the self-control, intelligence, and culture of our artisans, whether we are to secure the markets of the future world or to see the sceptre of production and commerce pass into other hands. There is, moreover, in the artistic, and therefore in the industrial, movement of the present age a peculiar feature which renders it necessary that our artisans should be an instructed, I might almost say a learned, class—I mean the imitative and diversified forms in which contemporary work is conducted. If we examine the industrial physiognomy of successive periods preceding the present century, we shall find that each period had its peculiar type of constructive and decorative art; that this type was accepted as the absolute canon of good taste by all minds or by nearly all; that the same style was equally applied to all purposes, secular and sacred; and that it in a great degree substantially expressed and embodied the social requirements of the time. Industrial art was thus confined within the limits of a single method, which was most carefully studied and carried out in a rather exclusive spirit, without much consideration of the works of previous periods or other races, except in so far as these affected the prevailing style, and with little appreciation of the excellences which such works might contain. Now, on the contrary, a multitude of constructive and decorative styles are used side by side in conformity with individual caprice; and this multifarious indulgence of the liberty of taste is only controlled by an impression, absolutely unknown to our ancestors, that certain specific types of art are appropriate to particular purposes. Thus our habitations in town and country, our political, municipal, and musical meeting-places, our warehouses, our railway stations, our churches, and our markets are constructed in different and discordant styles; our arts are all

importations or revivals, and our artists and mechanics have in one country and one age to learn and do the work of those who have lived and laboured in many and various lands during the lapse of two thousand years.

III. The education of the masses, both in its elementary and industrial aspects, is seriously affected by the manner in which the charitable and educational endowments of the empire are administered and applied. These endowments are vast in amount and variegated in purpose, and they affect popular education both in the way of support and impulse. They are partly available for the gratuitous instruction of the poor; they are also available for the benefit of the poor under instruction by opening up to them avenues to higher destinies in life.

It is far from my wish to attract my audience to the dangerous ground of party politics. I am little affected by sentiments of that nature myself, and if I were it would ill become me to suggest topics of dissension in an assemblage united for the discussion of philanthropic interests in a catholic spirit. But in speaking of education it is impossible to avoid matters that have been recently under Parliamentary debate, and I must endeavour to deal with them in a manner which will not disturb our common serenity.

The course pursued by the Endowed Schools Commission, with the sanction of the late Government, afforded material for the most exciting conflicts of the last session, in which both parties received lessons which they will not forget, and which I venture to interpret in the following brief conclusions.

The will of the founder, the voice of the dead, has not lost its power in the imaginations and hearts of Englishmen. Our people are not prepared to weigh the fancies and predilections of our forefathers strictly in the balance against policy. Something that is useful will still be sacrificed to the indulgence of the sentiments of fidelity and gratitude. If the purpose of the bequest be altogether frivolous, mischievous, or superannuated, it will be set aside, and some good object will be substituted, but wherever it is fairly practicable the primitive destination will be sustained, and in mixed and difficult cases something of the strain of the original design will be permitted to survive.

Local interests will make themselves respected. Attachment to locality is even a stronger sentiment in England than the love of retrospection. Where bequests can be preserved with any colour of justice for the parish or the municipality, it will not be safe to fuse them with schemes of a wider reach. Amalgamation is unpopular, even when it is expedient, and though local resistance may be vanquished in particular in-

stances, it will revive in other forms. The struggle which was commenced at the almshouse, the church porch, or the village school will be continued on the hustings and in the House.

Intellectual proficiency will not be the exclusive or capital condition of participation in pecuniary benefits. One of the leading features in the schemes of the Endowed Schools Commission was the institution of provisions under which cheap or gratuitous admission to the advantages of a higher education was offered to children in public elementary schools under a system of competition. Where the endowment contemplated or allowed the gratuitous education of the poor it was given to the poor, but under a system of selection. It is obvious that many arguments recommend this practice. It is fitted to introduce a spirit of emulation among the elementary schools, to elicit and reward individual capacities and exertions, to secure for the State the services of its ablest children, in whatever order. But it may be doubted whether the mere test of intellectual superiority will ever be thoroughly acceptable to the poor themselves, or to those who are most warmly concerned for their welfare. The public voice will still affirm that misfortune, suffering, and virtue have their claims as well as mind.

Where the endowment has been constituted with a distinct, conscious discriminating view to the benefit of a particular religious communion the destination will not be diverted.

If such be, on one side, the conclusions of the public mind in a conservative sense, there is another decision which recent events have rendered, if possible, still more unmistakable. The mass of national endowments available for the welfare of education in every stage, proceeding from pre-Reformation times, if not guarded by special destination of a binding nature, will be regarded as a common trust for the general good. They will not be abandoned to denominational uses. Exclusive denominational management, imperative denominational observances, and the limitation of honorific and pecuniary benefits to members of certain denominational bodies, will not be sanctioned by legislation or by usage.

It may also be affirmed in connection with this subject that public opinion has been gradually matured to an equitable consideration of the claims of women to a fair share in the national endowments available for education. The exclusive appropriation of these benefactions to the use of men can only be regarded with regret and shame, and as the means and opportunities of participation are opened it cannot be doubted that reparation will be made consistently with what are deemed to be the higher moral and social interests of the sex.

Entertaining the impression as I do that the educational endowments of England will be administered in the spirit defined above, I am comparatively indifferent to the agency on which the labour of revision and appropriation is devolved, and I do not doubt that the work may be prosecuted in a useful and acceptable manner by the body to which it is now entrusted.

The question to which I have referred has not been much agitated in Scotland, but Scotland is not less concerned in it than England. The ancient educational endowments of this kingdom are, with some exceptions, insignificant in amount and simple in character, while the comparative unformity of religious belief relieves the Scotch of difficulties which distract their Southern fellow-countrymen; but in the last half century a spirit of munificence has arisen here which renders the conduct of the State towards endowments of great significance. When we regard the deep religious convictions of the Scotch, and their strong local attachments in connection with the rapid accumulation of fortunes in the hands of men of popular origin and sympathies, there is nothing which education may not expect from living or posthumous liberality if the Government and the public continue to manifest a due respect for the designs of the founder. In all this, though it may not square with pure reason, there is nothing that a patient and kindly philosophy should condemn.

IV. The revision of endowments undertaken in a spirit of indulgence towards the prescriptions of the past and the affections of the present will still extend a powerful incentive to the elementary and the technical school, and give an impulse upwards to the children of the poor. Once placed upon the ascent, a second stimulus is supplied by the system under which public employments have become the prizes of learning.

The salaries of the State are now an educational endowment. Some are of opinion that the avenue to office of the higher kind can never be approached on equal terms by the rich and poor. Education, they contend, is an art, and sometimes an expensive art, and that branch of it which has to do with competitive examination requires teachers of special vigilance and ingenuity. The student at St. Andrews or Belfast supported on some slender bursary, and plying his unaided task in solitude and penury, but with his mental eye fixed on the Council at Calcutta, must work at a disadvantage compared with the aspirant who from childhood has pursued a systematic course towards a premeditated goal with all the instruments which competency can provide. Victory will wait

on those who combine the forces of discipline and contrivance with capacity, and the disposal of public employments will be transferred from the political patron to the professor of cram. There is much that is specious in such reflections, but as far as I see they are not justified by facts. Take the competitive examination for the Civil Service of India in 1872-3. There would seem to be no class of students more likely to succeed than the sons of members of that service, provided as they were with all the advantages that ambition, early destination, special knowledge in the parent, and pecuniary means can supply; yet all the sixteen candidates of this class failed, while out of four sons of ministers of the Established Church of Scotland who presented themselves three were successful. The English Universities, with the most powerful teaching apparatus in the world, furnished twenty-one candidates, of whom seven passed. The Universities of Scotland were so ambitious as to send up twenty-three, and attained the same measure of success. Eton and Harrow had sixteen candidates and not one triumph. The Grammar School of Aberdeen sent up two and passed one. It would be rash to draw conclusions from imperfect premises. It is possible that the powers of money and method have not yet been perfected, but in the meantime it looks as if, in many instances, the force of individual genius and independent labour would prevail, and these examples will be beacons to a thousand hearts. It is something to have opened such perspectives, to have kindled such hopes for ambitious spirits in whole classes of men whose horizon was once so narrow and so dull.

The encouragements to learning offered by the examination system are, however, not only for great prizes and chosen minds. They cover a wide field of employments accessible to ordinary ability. The Civil Service Commission is indeed a formidable instrument of interrogation, which examines everybody from a diplomatist to a dockyard mechanic. By a return recently made to Parliament it appears that there are thirty-nine departments of the Public Service, some of which embrace subordinate offices of great importance, in which vacancies are filled, or are to be filled, on the principle of open competition. During the eighteen months previous to January 1, 1874, the number of vacancies for which competitive examinations were held under the obligatory rule was 540, and for these 3,693 candidates were examined. But the principle of open competition has been voluntarily adopted by several departments in which it was not imperative, and in all other departments either the rule of limited competition or of qualifying examination is in force, so that some form or other of the educational test is enforced for

all ranks of the public service, even the very humblest. The work of the Civil Service Commission has thus become extensive and onerous. In the course of a year and a half 23,261 persons came before the Commission as candidates for offices belonging to, or connected with, the civil establishments of the United Kingdom, and if to these be added 1,418 military candidates and 643 candidates for India, we attain an aggregate of 25,322 aspirants to Government employment with whom the Commissioners had to deal.

It is to be remarked in connection with this subject that the method of open competition is decidedly progressive as opposed to the system of nomination and qualifying examination. I cannot stop here to examine the arguments of those who contend that the interests of the country might be better served than by the adoption of an expedient in the choice of its officers which does not provide a sufficient test of social, moral, and physical qualifications, and which offers impediments to those in the opulent classes of society who would gladly seek in the service of the State a theatre for active, honourable, and almost gratuitous exertion. Whether the course which we have selected be right or wrong regarded from the stand-point of general policy, it undoubtedly possesses a specific utility—it tends to diffuse intellectual movement and exertion among those who are less gifted with favour and with fortune.

As I approach the conclusion of my address I feel that I have scarcely crossed the margin of that attractive domain which contains the interests of the higher education, and I turn with regret from the contemplation of those great questions which are slowly emerging into more distinct forms by the combined elaboration of philosophic and practical minds. The satisfaction of the legitimate claims of women to a larger share in technical scientific and professional study and exertion, without prejudice to their physical welfare and their social and moral ascendency; the regulation of private teaching in a manner which shall insure progressive efficiency without repressing individuality and freedom; the development of united action on the part of the old Universities in raising the standard of teaching in public schools, and in affording tests and certificates of scholarship to the whole nation, without any sacrifice of their distinctive character as the resorts of study and the homes of religion and learning—these are matters which, before they can be brought to maturity, will require to be treated in a patient, candid, and loving spirit. Nor will this fail to be the case. There is nothing in the condition of the present age on which we may more justly congratulate our-

selves than on the abatement of party and class animosities. When I recall to my thoughts the narrow asperity which disfigured the contests of the last generation, I cannot but rejoice that the solution of these social problems has been reserved for a time when political and economical reforms, conducted alternately by either party in the State, have diffused a greater benevolence. We can now be just to each other and the past without any diminution of individual convictions or any loss of faith in progress.

Gentlemen, while we regard the great educational movement of the present age with sympathy and hope, it would not be wise to close our eyes to the dangers with which it might be pregnant, or to the obligations by which it is attended. Education and aspiration go hand in hand, and aspiration, if it is to be a useful passion, must be provided with the avenues of legitimate satisfaction. We are commencing an immense manufactory of minds. We must see that they have a market. We must not allow indigent and idle intelligence to accumulate on our hands. Knowledge without action, ambition without advancement, sensibility without enjoyment, labour without commensurate and congenial gain—these would be dangerous things in a free and industrial State. England, more than any country, exists by peace, by the co-operation of various interests and classes, by mutual forbearance and public confidence. It is a vast and powerful machine, but delicately adjusted. Conceive the masses of our people emancipated, and animated by a higher education, and invested with increased political franchises, as they will be in another generation, and conceive them degraded by the same sordid dwellings, restricted to the same limited recreations, seduced by the same destructive indulgences, subjected to the same precarious conditions of life, confronted by the same contrasts and inequalities of fortune and happiness—would such a state of things be consistent with the stability of our political and social institutions, and of those complicated relations of production, traffic, and credit in which we exist and by which we flourish? The maintenance of internal harmony would, under such circumstances, become infinitely more difficult, and the sensitive fabric of our prosperity would be dissolved by the first shock of civil commotion. If this be true, how powerful are the motives which impel us to prosecute the amelioration of our people by every channel of inquiry and exertion. It is not only by education that a good citizen is formed—that loyalty, patriotism, and public order are secured. It is by laws for the promotion of industry, sobriety, economy, public health, and

rational pleasures, and by the diffusion of the rights and enjoyments attached to the possession of property in all its forms. It is gratifying for us to reflect that in no community have these truths been more clearly seen and more firmly acted upon than in the great municipality which has opened its hospitable gates to this Association. Glasgow has availed itself of the powers and benefits of the Act of 1872 with promptitude, but the influences of education are aided here by works of unprecedented magnitude for the sanitary and social welfare of the working classes. The enterprise which was undertaken with courage has been conducted with wisdom, and the result will prove that the demolition of physical evils is not only an avenue to moral good, but that it can be effected without financial loss.

I now take leave of this general auditory, and enter upon my duties as President of the Education Department. I do so with diffidence, for I feel myself strange in a place of authority among many persons deeply versed and devotedly concerned in interests with which I have only a slender and transitory connection. I invoke their support, and I trust that my efforts will be accepted with the indulgence which is never denied to good-will.

Address

ON

HEALTH

BY

THE RIGHT HON. LYON PLAYFAIR, C.B., F.R.S., M.P.

MY address has been written under peculiar conditions, and requires apology. When the session of Parliament ended, I had not found time to consider even what the subject of the address should be. Since then I have been rambling in Switzerland and Italy, and of course have had no access to books of reference. Under these circumstances, I thought it best to address you in the capacity of an old sanitary reformer; for it was as long ago as 1846 that, as a member of the Royal Commission on public health, I published my report on the state of large towns in Lancashire. The memories and gathered experience of a veteran sanitary reformer may not be without interest, even if they are related without that method which would have been more apparent had the address been written in his library.

The first question which occurs is—are we making distinct and satisfactory progress by our sanitary measures? The answer to that question depends upon our periods of comparison. If we go back far enough in the history of our country, there are distinct assurances of improvement. Suppose that we begin with the Restoration, although our earlier records relate to London only. For twenty years after the Restoration, there was an exceptionally high mortality, even for that epoch, in the metropolis, and no doubt throughout the kingdom. Macaulay describes it as a time "when men died faster in the purest country air than they now die in the most pestilential lanes of our towns, and when men died faster in the lanes of our towns than they now die on the coast of Guiana." He was right, for the rate of mortality in London from 1660 to 1679 was no less than 80 in the thousand. Let us put in a tabular form the rates of death at various periods

since then. The annual deaths from all causes per thousand of the population were :—

1660—79	80·0
1681—90	42·1
1746—55	35·5
1846—55	24·9
1871	22·6

If, instead of a single year 1871, we take the average of 34 years, the existing death rate in England is 22·4 per 1,000. Hence one gratifying fact comes out clear and palpable, that the death rate is on the whole continually decreasing in this country, and that the chances of our lives are much better than in the days of our ancestors. If we restrict our view to the periods of the last two censuses—1861 and 1871—we are at first disappointed by learning that the mean age of the whole population was exactly the same—26·4—in both these years, and that the rate of mortality is only slightly different, two children out of 1,000 of the population being annually saved in the last year of the decade, while one more adult is cut off. But it would be a mistake to suppose that a stationary mortality necessarily indicates no improvement. The causes of mortality are increasing, and though the mortality remain stationary, there must be improvements in our hygienic arrangements to prevent the deteriorating action. There is a constant disposition among our population to congregate in towns and to leave rural districts. Hamlets become villages; villages are transformed into towns; and towns grow into cities. At the beginning of this century England had no town except London with more than 100,000 inhabitants ; now there are thirteen. There are 103 towns now in England and Wales containing upwards of 20,000 inhabitants, and these 103 towns contain a larger population than the whole of England and Wales did at the beginning of this century. And as the rate of mortality is largely influenced by the density of population, the causes producing sanitary improvement must be at least equal to those of deterioration. But that remark applies to England only, for when we turn to Scotland the deteriorating influences become unhappily too apparent. The following numbers give the rate of mortality for every thousand of the population in Scotland :—

	1855—59	1861—70
Principal towns	26·93	28·18
Large towns	23·94	24·58
Small towns	20·27	22·08
Rural districts	16·20	17·30

Thus every class of districts in Scotland is augmenting in its

rate of mortality. Do not let us Scotchmen, saturated as we are with national pride, shut our eyes to this startling fact. Our towns are increasing in density of population, and sanitary appliances are not equal to the increase. But the character and habits of the population are also changing. Scotchmen emigrate in large numbers, while an Irish Celtic population takes their place. From ten to thirty per cent. of the population of our towns now consists of this Irish Celtic element, and their habits have not improved the sanitary condition of the Scotch urban populations. But this one circumstance is far from explaining the general deterioration, which is nearly as marked in small towns and rural districts as it is in the centres of manufacturing activity. No doubt the death rate is much in proportion to the density of population; but it is not in proportion to the numbers in a city. The death rate of London, that huge metropolis, is only 22·4 per 1,000, or the same rate as that of small Scotch towns, and very different from 30·4, the death rate of Glasgow, or 31·3, the death rate of Greenock. Nor can the difference be due to climatic severities, for while 30·4 out of 1,000 die in Glasgow, only 19·4 die in the rural districts of Lanarkshire. Let me leave this part of the subject for the present, although I will return to it hereafter, to consider what are the causes which govern life and death, so far as disease is preventable by agencies over which man has control. My phrase is unphilosophical. Man has not control over a single natural force. He may indeed use the forces of nature, by means of his intelligence, to effect a specific end, but he cannot turn them a hairbreadth out of their course. The laws of health, like other laws of nature, are relentless in their severity. If you stand on the verge of a precipice and overbalance yourself, the law of gravity relentlessly pulls you down and dashes you to pieces on the base. Equally without mercy are you punished for the smallest infraction of the laws of health, whether you live in cities or in fields. Man, indeed, has no control over a single law of nature, but if he live in obedience to these laws, he will find that they are arranged with supreme beneficence for his well-being. An intelligent submission to them produces health and longevity, while the slightest infraction of them is mercilessly punished with disease and shortness of days. What are these laws? Many are known; others remain to be discovered. For my purpose, at present, I can only refer to some of the more important.

By public health is meant the health of communities, as distinguished from that of its individual members, though

necessarily the former is the sum of the positive and negative conditions which act upon the individuals. The health of an individual depends not merely upon existing but also on antecedent causes. Part of his health is transmitted from his ancestors, and may be a mere survival of hygienic conditions which have been extirpated. Part of our health also depends upon the external conditions of our upbringing when young, and part also on the influences, physical and moral, to which we are exposed all through our lives. As there is no individual who can be said to have all his organic functions in the most perfect action, so is there no community that can be considered in a perfectly healthy state; for the general health depends upon all the moments of the private health of individuals. The health of a nation, physiologically considered, stands closely in relation to that of an individual. The nutrition and health of an individual depend upon the well adjusted balance of the supply and waste of the particles which compose the body. These particles of the body, all through the life of a man, are incessantly dying and are being replaced by new particles continually springing into life. Every organ is thus undergoing, through its particles, a continued and rapid alternation of death and life. As the whole body of a man is to one of these particles, so is the whole body politic of a nation to the individuals of which it is composed. The death of an individual in a State is strictly analogous to the death of a particle in a single man, and the birth of an individual in a State is the analogue of the moulding of a new living particle into the body of a man. When an individual becomes diseased there is some want of balance between the waste and supply of his organs—or rather of the underlying protoplasm which is so incessantly changing from life to death. When the waste of the ultimate particles is greater than the power of restoration, disease attacks the individual. So in the body politic: when the rate of mortality is too high, that is, when the individuals of its population, which constitute the particles of the State, waste too rapidly, the State suffers from public maladies. Hence the State medical officer and the private physician work on like principles; for to the former the community, to the latter, the individual, is the patient. This relation of the individual to the community, and the reflex action of the community on the individual, give a double motive for sanitary action. For the community, depending as it does on all the moments of health of individuals, requires to watch and cherish them; while each individual must feel that it is his interest to watch the health of his neighbour, upon whose soundness rests the foundation of

his own well-being. So that the common law of health is the Christian law:—'Thou shalt love thy neighbour as thyself.'

If this analogy between the physiological condition of a community and an individual be real, as I believe it to be, the essential conditions in the health of communities, and of individuals, must be the same. They must be well-clothed, well-fed, well-housed, well-aired and well-watered.

The more we consider the question of public health the simpler does the problem become in theory, though its attainment is difficult in practice. All that we need aim to secure is purity or cleanliness in the house, the air, and the water, and genuineness in the food and clothes. In fact, a great part of sanitary science can be comprised in that one word—cleanliness. No epidemic can resist clean houses, clean air, and clean water. Death, like the evil demons of old, shuns cleanly places. In olden times, as among the Jews, evil spirits dwelt in filthy places, especially loving tombs and ordure. Every private closet contained a special demon of its own, and does to the present day in a different sense. I am quite sure that the chamber of Sara, the daughter of Raguel, as described in the book of Tobit, must have overlooked a dunghill, otherwise she would not have been so grievously afflicted by the unclean spirit Asmodeus, who, out of love for her, strangled her seven husbands. But Tobias, her eighth husband, for whom his father-in-law considerately dug a grave as soon as the marriage was performed, obviously knew that there might be smells even too bad for a demon, for, on the bridal night, he threw the putrid heart and liver of a fish on some burning embers in her chamber, and, as the narrative tells us, 'the which smell, when the evil spirit had smelled, he fled into the uttermost parts of Egypt.' To my mind the book of Tobit is a distinct hygienic allegory. The good Tobit had a craze for burying dead bodies, and had all his troubles in consequence of his hygienic propensities. Sleeping in a foul place, the sparrows muted warm dung into his eyes and rendered him blind. But Raphael, whose name, by interpretation, means 'the medicine of God,' comes as an angelic guide to his son Tobias, and puts all things right by his hygienic knowledge—conquering even the foul demon Asmodeus and curing Tobit of his ophthalmia; acquired, as our workhouse children now get it, by foul air.

The ancients fought against evil smells more vigorously than the moderns. Sometimes, indeed, they simply tried to mask them with perfumes. Thus, when we hear that ancient Capua had whole streets filled with perfumers' shops, we know that it must have been a foul-smelling and ill-governed city.

If you were to ask me at the present day what are the best rules for disinfecting foul smells, I could not give you simpler or better ones than those of Ulysses as described in Homer. After slaughtering Penelope's suitors, and scattering their blood and brains over her spacious halls, he first makes a thorough cleansing :

> With thirsty sponge they rub the tables o'er
> (The swains unite their toils) ; the walls, the floor,
> Washed with the effusive wave, are purged of gore.

And it is only after thus thoroughly removing every origin of bad smells that he uses a disinfectant to destroy any foul gases which might still lurk in the room :—

> Bring sulphur straight, and fire, the monarch cries;
> She hears and at his word obedient flies,
> With fire and sulphur, cure of noxious fumes,
> He purged the walls and blood-polluted rooms.

Contrast the proceedings of the wise Ulysses with those of Eidothea, the daughter of the old sea-god. She fell in love with Menelaus, who, with his two companions, was cast upon the island of her father. To conceal them from the old sea-god, she wrapped them in the skins of fresh-flayed seals, and made them lie among the flock. Menelaus groaned under the horrid smell of his disguise, till the divine lady brought a powerful scent to mask the putrid odour :—

> Dire was the ambush, and the scent severe,
> Who could a rank sea-beast at such close quarters bear?
> But she, delivering us, a great help planned,
> And placed Ambrosia near the lips of each,
> Which in our nostrils breathed an odour bland,
> And the sea monsters' stench did overreach.

Ulysses was an excellent hygienist, but Eidothea was not. The first went to the root of the matter and first removed all sources of impurity ; the latter merely concealed a stench by a perfume. Hercules, too, was one of the oldest and most thorough of the ancient sanitarians. He saved the Eleans from pestilence by draining their marshes, and executed a thorough sanitary operation when he cleansed out the Augean stables by turning into them the waters of the Alphaeus. But of all sanitary reformers, Moses was among the most practical. He was learned in the wisdom of the Egyptians, and they, as we know, were hygienists. One of their commandments, though it does not remain among the ten which Moses brought down from the Mount for our guidance, was, 'Thou shalt not pollute rivers.' The hygienic laws of Moses, supplementary

to his ten moral commandments, are full of wisdom. The purifications required by religious observances were in the main hygienic precautions. The ceremonial part still remains in the East as a survival of a purpose which is now forgotten. Moses gave to us the principle of the modern earth closet, and excellent rules for isolating and disinfecting diseased patients and their excretæ. He established health officers, or rather gave to the High Priest the function of an officer of health. Before long we may be obliged to enact the ancient laws of Moses for isolating patients with infectious disease, and for cleansing the houses in which it occurred. In the case of cattle, we knock them on the head and kill them, and there is an end of cattle plague. We cannot do that with men. But if we could isolate cholera patients and disinfect their excretæ, we could as easily prevent its spread as in the case of cattle-plague. We do isolate them in the case of ships—why not in houses? The isolation of patients afflicted with small-pox, scarlatina, and measles will one day become a part of hygienic law, though at present it would not be supported by public opinion. In the time of Cardinal Wolsey plague patients were strictly isolated. Most religious reformers, like Mahomet and Menu, have also been apostles of cleanliness. During the best times of Greece and Rome public health was much studied. The anatomical and pathological examination of the intestines of sacrifices was a hygienic precaution to ascertain whether the locality upon which a city was to be founded or a camp pitched was in a healthy condition. The supervision of hygienic arrangements was an office of dignity among the Greeks and the Romans. Epaminondas, one of the greatest military geniuses that Greece produced, did not refuse the office of 'telearch' at Thebes, though its chief duty was to supervise the cleansing of the streets. For this Plutarch justly commends him. In like manner, at Rome, the cleansing and disinfection of streets and sewers were placed under a high officer of state, because, as Justinian tells us, 'uncleansed and unrepaired sewers threaten a pestilential atmosphere, and are dangerous.' Of the surviving works by which the greatness of Rome is still evidenced, perhaps the first is the Civil Law, but second stands its sanitary works, as evidenced in the great aqueducts, the cloaca maxima, and other hygienic appliances. It is, then, clear that the ancients knew as well as the moderns the main conditions of public health, viz., that foulness is the source of disease, and that cleanliness is its preventive. Purity of the person, purity of the dwelling and its surroundings, purity of the air, purity

of the water, purity of the soil—in one word, cleanliness—form the beginning and the end of hygiene. It is chiefly amid great plagues and calamities that men look for more occult causes of disease, such as comets, terrestrial exhalations, volcanic emanations, celestial conjunctions, or the poisoning of wells by Jews, just as now people are apt to refer them to electricity or magnetism. Sydenham himself, that model physician, must look deep down into the bowels of the earth for the causes of epidemics—into the *interiora terræ viscera.* Men would not then look at their own surroundings for a simpler explanation, but fastened on some strange phenomenon which might appear. There are some rough mining districts in this country, where, if a strange traveller appears, the boys run after him with the shout, 'Here is a stranger; come, let us stone him!' Philosophers seized hold of any strange phenomenon in like manner, and pelted it as the cause of human woe. But the progress of knowledge brings us back to the simplicity of ancient faith, that foulness breeds the demons who desolate our hearths, and that they cannot abide in cleanly habitations which they abhor. And so the sum and substance of all our sanitary science accumulated by ages may be summed up in the pregnant advice of the prophet—WASH AND BE CLEAN. It is the simpleness of the remedy as a cure for the public ills which so grievously affect us that prevents its public recognition. If I had talked to you about *schizomycetes,* including bacteria and its allied forms, if I had described vibriones, and all those organic bodies which are floating in the atmosphere, or which appear in decaying substances and in the blood of diseased persons, you might have thought that the chairman of the health section had some sanitary learning, and that it was worth coming to hear his discourse. But you revolt at the simplicity of his statement—that cleanliness is the beginning and the end of all practical sanitary work. Well, you are not singular. There was once a rebuke to such doubts given on another occasion:—'If a prophet had bid us do some great thing, would we not have done it? How much rather when he saith unto us—wash and be clean?' That cleanliness—both physical and moral purity—is next to godliness, should be the saving faith of every sanitary missionary.

Do not, however, think that I undervalue the numerous researches which have been made in recent years as to the organised causes of disease, whether we call them by such general names as microzymes or *contagium animatum.* I have read all the memoirs on these subjects with the highest possible

interest, for the specific characters of diseases lend much support to such views. When you find that the virus of small-pox reproduces small-pox only, and that of scarlet fever breeds scarlet fever only, you are as much inclined to refer their origin to a specific organism as you are to attribute a puppy to a dog or thistledown to a thistle. But the researches on the microzymic origin of disease, though vastly important, are scarcely yet within the domain of practical application. These bodies of low organised types are always associated with foulness. But whether putrid emanations are the result of the growth of these organisms, or whether the emanations form the only soil in which they can grow, neither I, nor anyone else, can tell you with certainty. Perhaps the problem will ultimately be as insoluble to philosophers as that involved in the doubt whether it was the first hen that laid the first egg or the first egg that produced the first hen. But what is quite certain is that if filth be entirely prevented none of these entozoa will permanently remain, and therefore the practical maxim should still guide you—WASH AND BE CLEAN. But understand this practical maxim in its full significance. I do not mean mere personal or objective ablution, but an uncompromising war with uncleanliness of all kinds. In this way you may use water as an agent, or disinfectants, or drains, or fire, or any other means of utterly removing and destroying all filth and all its consequences.

Let me now give a few illustrations of the consequences attending the neglect of this hygienic maxim. When the civilisation of the Egyptians, the Jews, the Greeks, and the Romans faded, the world passed through dark ages of mental and physical barbarism. For a thousand years there was not a man or woman in Europe that ever took a bath. How different that time was from the times which preceded it, when daily baths were common among the poor, you may gather from the praises of personal ablution which abound in ancient authors. Take, for instance, Martial's address to his friend Oppian, on the limpid and unpolluted water in the Virgo and Marcian wave, in which it was rapture to bathe:—

> Water so bright, and clear, and fair,
> You think no liquid can be there;
> You're not attending, Oppian,
> You'll die without once having washed, poor man!

But only think what must have been the state of Europe when thirty-three generations were like Oppian, and never once washed, if their historian Michelet is to be believed. No wonder that there came the wondrous epidemics of the middle

ics which Defoe does not do. The plague at Bordeaux, which Montaigne fled to his country-house, killed 18,000 40,000 people. It followed him and destroyed whole es. The harvest was not reaped, the grapes were un-ed, and men's minds were occupied not with the thought , but how to protect their bodies from wild beasts after death. He gives a terrible picture of one of his own nen, whose last act of life was to draw the earth over his ing body. It is not a pleasing task to dwell on the habits e population, even in our country, in past times. Go only to the time previous to the Reformation, and you ave no difficulty in understanding why luxury and r produced the plagues of the times of the Tudors and tuarts. High above all other dwellings were the castles e monasteries, but the cabin of the peasant was worse any to be now found in the furthest isles of Scotland. s made of reeds and sticks plastered over with mud. In wigwams lived an ague-stricken population. In the the mechanics lived in rooms without glass windows, on straw beds, and worked in workshops unheated by fires. Even in well-to-do-houses rushes covered the n floors, and got saturated with scraps of food, which ned to putrefy under a new layer of rushes scattered over that the "petremen" came to dig saltpetre out of the Filth, instead of being abhorred, was almost sanctified. nonks imitated the filthy habits of the hermits and saints ly Christian times, for the early fathers commended them. St. Jerome used to praise the filthy habits of hermits. pecially commends an Egyptian hermit who only combed

indicated cleanliness of the soul. Practically, indeed, it helped to it. Because the odour of sanctity which infested these old monks and hermits, helped to keep them apart from the temptations of the world; for the world scarcely cared to come into too close contact with these odoriferous saints. But this association of filth with religion was unhappy in its consequences, for men ceased to connect disease with uncleanliness and resorted to shrines and winking virgins for cures of maladies which were produced by their own physical and moral impurities. Even the palaces of kings were filthy, if we are to believe the Duchess of Orleans' Memoirs of the splendid cour of Louis XIV. Under all these influences plagues were very destructive in England. Men first began to connect them with filth by some striking examples. Thus in 1665, when the Court and Parliament assembled at Oxford, it had an immunity from plague, and the reason of this immunity was traced to the thorough cleansing which the magistrates gave to the city to fit it for its distinguished guests. The great fire of London also taught Englishmen a wholesome lesson, for it came as a great sanitary agent to extirpate the foul nests of disease in the metropolis. And so at last the moderns learnt what the ancients knew very well, that public health can only be assured by cleanliness, and that filth is the parent of disease both among individuals and communities.

Hippocrates, who was the first hygienist that wrote a whole book on public health, took as his text pure air, pure water, and a pure soil, and you see we have arrived at nearly the same view of the essential conditions of health. Napoleon, as a result of long experience in the hygiene of armies, came to the same conclusion, for he said to Autonomarchi at St. Helena:—'Life is a fortress which neither you nor I know anything about. Why throw obstacles in the way of its defence? Water, air, and cleanliness are the chief articles in my pharmacopœia.' And so are they in the pharmacopœia of the public health medical officer. Let us consider them separately. Air is of all things the most familiar to us, and the one most forced on our observation. To breathe it is our first act of life; to be unable to respire it is the last act, which is followed by death. All during life it is never absent from our voluntary or involuntary actions. It fans us with gentle breezes, and it buffets us with storms. Surely we ought to know everything about this familiar object; yet in fact we are by no means intimately acquainted with it. During my lifetime it has incessantly presented new phases to closer observation. When I was a student of chemistry at the Ander-

ages, which cut off one-fourth of the population of Europe —the spotted plague, the black death, sweating sickness, and the terrible mental epidemics which followed in their train—the dancing mania, the mewing mania, and the biting mania. But even when the middle ages had passed away, and the sun of civilisation was again rising over the gloomy darkness of these centuries, what a heritage of filth-produced disease still remained! Look at Defoe's or Montaigne's descriptions of the plagues of their day. Montaigne gives us some statistics which Defoe does not do. The plague at Bordeaux, from which Montaigne fled to his country-house, killed 18,000 out of 40,000 people. It followed him and destroyed whole villages. The harvest was not reaped, the grapes were ungathered, and men's minds were occupied not with the thought of life, but how to protect their bodies from wild beasts after their death. He gives a terrible picture of one of his own workmen, whose last act of life was to draw the earth over his expiring body. It is not a pleasing task to dwell on the habits of the population, even in our country, in past times. Go back only to the time previous to the Reformation, and you can have no difficulty in understanding why luxury and squalor produced the plagues of the times of the Tudors and the Stuarts. High above all other dwellings were the castles and the monasteries, but the cabin of the peasant was worse than any to be now found in the furthest isles of Scotland. It was made of reeds and sticks plastered over with mud. In these wigwams lived an ague-stricken population. In the towns the mechanics lived in rooms without glass windows, slept on straw beds, and worked in workshops unheated by coal fires. Even in well-to-do-houses rushes covered the earthen floors, and got saturated with scraps of food, which remained to putrefy under a new layer of rushes scattered over it, so that the "petremen" came to dig saltpetre out of the floors. Filth, instead of being abhorred, was almost sanctified. The monks imitated the filthy habits of the hermits and saints of early Christian times, for the early fathers commended them. Even St. Jerome used to praise the filthy habits of hermits. He especially commends an Egyptian hermit who only combed his hair on Easter Sunday, and never washed his clothes at all, but let them fall to pieces by rottenness. St. Antony never washed his feet. St. Thomas à Beckett, when martyred, had under garments in a state which makes one shudder in the remembrance. And so the monks up to the time of the Reformation, and indeed in part up to the present day, thought, or professed to think, that by antithesis, pollution of the body

soil acts as a disinfectant, and prepares the foul materials to become the food of plants.

This conversion of putrid matter into carbonic acid, water and ammonia is undoubtedly the final result of natural purification. The desire to attain it speedily has been recently expressed in the attempts to revive the cremation or burning of dead bodies. I quite approve of the end proposed, though I am not quite clear as to the means of producing it. Burial in a porous soil produces the same results, and if the earth be sufficient and well selected, it does so quite inoffensively. Then the bodies decay, not by putrefaction alone, but by eremacausis. That word, which is merely the scientific word for decay, means burning by degrees, from *ερεμα by degrees*, and *καυσις burning*. So a porous soil, containing sufficient loam to be absorptive, is in fact a slow furnace, where burning is complete in itself. Sepulture was adopted by the Egyptians, who never doubted the resurrection of the body, and was continued by the Jews, although there is very little evidence that they believed in a future state. But modern science tells us that we may burn or bury the dead utterly regardless of the body itself, for that inevitably sooner or later passes into gases destined to be the future food of plants, and through them of successive generations of men and animals. If cremation, therefore, be the most practical process of attaining this inevitable end, I see no objection to it. Only I doubt whether it is so. Many years since I proposed that bodies should be thrown into gas retorts heated white hot. The volatile portions would be converted into illuminating gases, which might at once be burned, or if desired could be used, so that we might continue to live in the light of our ancestors; while the residue, in the same form as the body, would be harmless coke, and might be given to the survivors for sepulture. This process, I think, is more practically attainable than cremation in crowded cities, and is equally sanitary. But as I get older I am inclined to think that the process of burial in the earth is the wisest of all, provided it is done with honesty—not in the midst of populations or with overcrowding of the dead, as with the living—but allowing sufficient absorptive earth to secure the final result, equally the end of cremation and sepulture, that the whole organic matter of the body shall pass into the gaseous forms of carbonic acid, water, and ammonia. These, as I have shown you, are the final results of atmospheric purification.

How differently do we act in our civic arrangements. Instead of allowing garbage to be freely oxidised or applying it to plant life, which is its natural destination, we dig holes

close to our own doors, and cherish the foul matter in cesspools under conditions in which air cannot enter freely, and therefore the most favourable for injurious putrefaction. We forget the experience of our forefathers, that every cesspool has its own particular evil spirit residing within it, and we are surprised when the demon emerges, especially at night, and strikes down our loved ones with typhoid fever or other form of pestilence. Perhaps we go a step further in the hygiene of moderns, and do throw the foul matter into drains, which empty themselves into our once beautiful rivers, though in many cases they are still used as a beverage by people lower down in the stream. And when they remonstrate with us, we, surly wolves, growl at the poor innocent lambs lower down the stream, because they object to drink our abominations. This country once gloried in her beautiful rivers, but they are now mere open ditches, which pollute the districts through which they flow. Rivers in their normal state contain dissolved air sufficient to oxidise and destroy any accidental organic contaminations. This purifying power of air dissolved in water is essential, because no water, either in rivers or springs, could otherwise be pure. All sources of water are ultimately obtained from rain, and that is never pure, because it washes out organic impurities from the atmosphere. At the same time it carries down air in solution, so that it brings with the poison its natural antidote. The air-purifying process is however limited, and is altogether insufficient for streams polluted with town sewage and manufacturing refuse. In them you find no free oxygen, for that has been used up by the first small portion of impurities poured into the streams. Take, for instance, the beautiful Clyde, which ought to wash, but which fouls, this great city. I have analysed its waters miles above and miles below Glasgow. Long before it reaches the outskirts of the city it is already fouled, but after passing Broomielaw its condition is abominable. My friend Dr. Angus Smith has analysed the waters in its isthmus, and has found these pollutions even in the water of the beautiful sea-bathing resorts which are so much frequented by the upper classes of the city. The self-purifying power of rivers, and even of the sea pouring in its tidal wave to dilute them, has no chance against the mass of abominations which large towns pour into them. But there is no longer an excuse for their doing so, for there are now various effective and well-matured processes for purifying drains before the water is ultimately discharged into the river. You cannot take out these abominations from the river itself, but you can readily prevent them being put in. Coleridge

saw this when he wrote so fiercely on the foul smells of the city of Cologne:—

> But tell me, Nymphs! what power divine
> Shall henceforth wash the river Rhine?

The only mode of restoring our great rivers from their present condition of open ditches to their natural purpose of watering and purifying the districts through which they flow is to prevent polluted matters being poured into them. Parliament must enact for this country the ancient commandment of the Egyptians, and say to all municipalities and manufacturers, 'Thou shalt not pollute rivers.' They have already said so to the latter in regard to air. When I was a student in Glasgow, I remember that the tall chimney of St. Rollox used to vomit forth noxious vapours, destroying vegetation and annoying the inhabitants. I had some small influence in persuading the late Lord Derby to pass an Act forbidding the pollution of air, and I am sure that the Messrs. Tennant and all other soda manufacturers are glad that we forced them to condense their acid fumes. Well, I say with perfect deliberation, and after full study of the subject, that our knowledge in regard to the purification of drain waters, whether these contain town sewage or manufacturing refuse, is abundant and practical, and that all municipalities and manufacturers should now be prohibited by heavy penalties from fouling rivers. The compulsion would be a positive benefit to both. I may remind you that the present Prime Minister has lately told a deputation that he is greatly interested in this object. I hope that he is destined to do for water what his former friend and political chief, Lord Derby, did for one of the many impurities in air. Such a triumph of sanitary legislation would be worthy of the great state doctor who has taken as his motto '*Sanitas sanitatum omnia sanitas.*' If he achieve the purification of our rivers, I am sure that I can promise him from this Association, and indeed from all political parties in the state, an amount of applause which can best be expressed in the words, if not in the meaning, of Macbeth, when he says:—

> Come, Sir, despatch; if thou coulds't, doctor, cast
> The water of our land; find its disease,
> And purge it to a sound and pristine health,
> I would applaud thee to the very echo
> That should applaud again.

Mr. Disraeli has obviously thought much about subjects of public health, as evidenced in the wise observations of Mr. Phœbus in 'Lothair.' When, then, in his celebrated Manchester speech, he pledged himself that a Conservative Govern

ment would devote special attention to sanitary subjects, I believe that he expressed a deliberate and mature conviction. But, hitherto, probably from the force of circumstances, we have had promises only without their fulfilment. Surely another Session cannot pass without a serious attempt at sanitary reform, when we recollect that the Prime Minister of England is the same orator who used the following remarkable words: "I think public attention ought to be concentrated on sanitary legislation, I cannot impress upon you too strongly my conviction of the importance of the Legislature and Society uniting together in favour of these important results. After all, the first consideration of a Minister should be the health of the people."

In the recent progress of hygiene nothing has been more clearly proved than that diseases are largely propagated through foul water, and recent investigations seem to point to the unpleasant circumstance that the germs of disease chiefly come from the excretæ of men as they enter into a state of putridity. Whole villages and streets in large towns have been stricken with disease by portions of human excretæ finding their way into water. Take the fever epidemic in London last year. A dairy company used the water of a well which had received the drainage of a person infected with fever, this drainage having percolated through the soil to the well and contaminated it in the usual manner in which well water is so constantly fouled. Hundreds of persons, among whom were some of my relations, were stricken down by the milk polluted with this impure water. Take as another example the case which has happened while this address is passing through the press. A large public school, supported by national subscriptions, is thoroughly wrong in its hygienic arrangements. In its cisterns are foul waters, and close to its playgrounds are filthy cesspools. A most distinguished sanitarian—Dr. Anstie—visits it, and is lost to the world and to science during his inspection. Let us hope that the sacrifice of this precious life may lead to much sanitary improvement in our public schools. When the virus of disease enters the body in a state of solution, it is in a state most favourable for development. And as water is the common vehicle for removing impurities from dwellings, it becomes especially important to prevent waste water from entering into any source of water supply which is to be used for drinking or any other domestic purpose. But what is the condition of many towns, such as London itself? They are situated on rivers from which their water supply is derived, and it may be, and often is the case, that

hundreds of thousands of persons pour in their abominations into the river before it is used for the town lower in the stream. London in this way has to drink all the foul drainage of about a million persons above it in the stream. The people cannot realise this nastiness, or they would not tolerate it for a day. Glasgow is happily situated in this respect, for it receives the pure and soft water of Loch Katrine. If London had such a source of supply, I believe that it would stand as a model in its death-rate to all the towns in the kingdom.

From what I have already said you will observe that the natural purifiers, on which we should rely in combatting the pollution of our cities, are a free supply of untainted air, unpolluted water, a porous soil, the pores of which are open and not filled up by undrained waters, and, let me add, a healthy vegetation in the squares of our towns to help to purify their atmospheres and to pour into them life-giving oxygen. It is the want of these conditions which make both town and country dwellings unhealthy.

In ancient as well as in modern hygiene the importance of an adequate ventilation of streets and houses was well known. It was also a matter of recognized experience that even efficient ventilation of these would be of little use unless the ground on which they were built was also ventilated, that is, drained of underlying water, so that the air might penetrate and circulate freely through the porous soil, in order to disinfect it from the continually accumulating *débris* of a crowded population. A few years since, while wandering amid the ruins of Cæsar's palace at Rome, I was stricken with the well known fever of that city, and during my convalescence I had ample time to speculate on its causes. Those of you who have been in Rome will recollect how shallow now is the depth of the Tarpeian rock, and how deep down below the level of the surrounding streets are the floors of the forum and ancient temples and palaces. All that is above them is the organic and inorganic *débris* of thousands of years, which when stirred up, and coming in contact with oxygen, begins again to decay, and continually emits those exhalations which find their expression in the Roman fever. The same is the case on the site of ancient Jerusalem. I remember to have read somewhere that when a shaft is sunk to the base of the Temple, the decaying matter of many past generations is set into action, and quickly destroys the wood with which the shaft is lined. Unless, therefore, the soil upon which a city is built is well drained and ventilated the dwellings of the city cannot be

healthy. It is not in fevers alone that the influence of the soil is apparent. Probably consumption itself, that great scourge of this country, is a chronic zymosis, or disease like many of our fevers, arising and communicable from like hygienic deficiencies. It is greatly mitigated by drying and ventilating the soil, as well as by ventilating the dwellings. After the sewerage of Salisbury had been made effective the deaths from phthisis fell 49 per cent., in Ely they fell 47 per cent., in Rugby 43 per cent., and in Banbury 41 per cent. Dryness and elevation, and well-ventilated rooms are powerful means to prevent as they are to retard consumption. In the last generation the average period of that sad disease was two years. Now, according to Dr. Williams, it is eight years. With pure air in the soil and in the dwelling, let us hope that the succeeding generation will point to it as a rare disease instead of as one of the most common maladies of this country.

Free ventilation around the houses, as well as within them, was enjoined by the ancients, but was as much neglected by them in practice as it has been by the moderns. Zeno ordered, after a long neglect, that houses in Constantinople should be twelve feet apart all the way up. His orders were disobeyed, but fire in Constantinople has repeatedly done for it what fire has done in London. Ancient Rome, like modern Glasgow, became very bad with its closely built houses, and at last they were ordered to be five feet apart, and not more than nine storeys high. Augustus limited their height to 70 feet, and Trajan to 60 feet. We do not know how many people lived in these houses, or how many congregated on an acre. But we do know some facts as regards our own population. Taken on an average all through England, the towns are less packed with houses and people than one could have anticipated. In primitive countries, where the savage lives on the produce of the chase, there is one inhabitant to each square mile. In the time of our Saxon ancestors in this country there were five houses to each square mile, and probably about thirty inhabitants. Good but high-handed Queen Elizabeth was so horrified with the gigantic growth of London, although it then contained only 160,000 people, that she forbad the erection of any more buildings within three miles of London and Westminster, and she prohibited the division of a house into tenements for various families, 'because' (I quote her own words) 'great multitudes of poor people inhabiting small rooms, and those very poor, and such as must live by begging or worse means, being therein heaped together and in a sort smothered, with many families of children and servants in one house or small

tenement, it must needs follow that, if plague or sickness came amongst them, it would presently spread through the whole city and confines.' Well, does this not sound like modern lecturing in the crowded city of Glasgow, where noble and gallant efforts, however, have recently been made to mitigate the evil, and with a large promise of success? In Queen Elizabeth's time there were 15 houses and 83 people to the square mile in the whole of England. Now there are 73 houses and 390 people. In all the English towns—excluding the rural districts—there are 713 inhabited houses and 4,061 inhabitants to a square mile. That gives nearly an acre to each house containing six persons. You see, therefore, that the area of a town is far from being wholly occupied. But just compare that with large parts of Glasgow before the passing of its Improvement Act in 1866. Instead of six people to an acre, which is the urban average in England, there were districts with 600 people to the acre, 50,000 people being huddled together on 80 acres. Even now, Glasgow contains 100 persons to the acre; while London and Edinburgh contain about 46 to the acre. In 1871, when the census was taken, only 5½ per cent. of all the families in Glasgow had more than four rooms, or, in other words, 94½ per cent. of the families had such insufficient accommodation that in no case had they more than four rooms, and in most cases fewer. In fact, nearly one-half of the population of Glasgow (exactly 46 per cent.) live in one-roomed houses. Edinburgh has 78 per cent., with the scant accommodation of under four rooms, and 22 per cent. with the superior, and its rate of mortality is 25·7. If you now compare by a simple rule of three the relative density of population with the relative mortality of Edinburgh and Glasgow you will find that the increase of mortality in Glasgow nearly corresponds to its increased density in population.

The four towns of largest mortality in Scotland—Paisley, Dundee, Glasgow and Greenock—have such dense populations that from 93 to 94 per cent. dwell in houses with four rooms and under. Notwithstanding the efforts made in Glasgow and Edinburgh to improve the house accommodation of the poor, the latter often defeat the intentions of those who built capacious houses, because they overcrowd them with lodgers. The working man does not spend the same proportional amount on rental that the middle class man does, and is apt to try to decrease his weekly house payments by adding lodgers to the other inmates, who are already amply sufficient for the accommodation provided. If a room be adequate in its cubical contents of air for one person sleeping within it, yet it may be

wholly inadequate for two or more persons. Although the amount of air required by an individual for respiration is comparatively small, yet he fouls so much air both by carbonic acid and organic exhalations that a large quantity of air must pass through an apartment to keep it sweet. If the air contain even one cubic foot of carbonic acid to 1,000 cubic feet of air it is vitiated air in an apartment. Now, to keep pure air in a room, from two to three thousand cubic feet should be allowed to pass through a chamber every hour for each person sleeping or living in it. I need not trouble you with the data for this assertion. It is not a large enough allowance for hospitals or for rooms where there are exhalations of the sick. And unluckily the prevailing impression is that a far smaller amount of air suffices. In schools, for instance, often not one-fifth the amount of ventilation is given which is requisite for health.

Our rooms would become intolerable if it were not that there are natural, though insufficient, sources of ventilation beyond our control. The walls and mortar, though not transparent to light, are transparent to air, and through them is constantly passing an interchange of vitiated and pure air. Brick is, however, more porous to air than sandstone or limestone, and Scotch houses are not so easily ventilated by natural means as English houses. Indeed, were it not that the mortar which joins the stones happens to be readily permeable to air, stone houses would be in a bad condition. Of course it is obvious that the fewer persons there are in a house or room the greater becomes the superficial area of the building to each individual, and the more efficient the uncontrollable ventilation. Still air is of little use in ventilation, for the origin of the word *ventus*, wind, indicates that there must be air in motion. There are only two practical modes of producing this in our dwelling-rooms. We must either admit the external air when it is in motion, or we must produce movement by an elevation of temperature, such as fires, within the room. As the pernicious effect of draughts on susceptible persons depends on an abnormal cooling of the body, the task of the ventilator is to obtain efficient change of air without chilling one part of the body more than another. In modern hygiene nothing is more conclusively established than the fact that vitiated atmospheres in our dwellings and their surroundings are the most fruitful of all sources of disease. The exceptions to this statement are easily explained. Thus, in the wretched dwellings and filth-polluted premises in the islands of Scotland, you would expect to find a large rate of mortality, when in reality it is comparatively small. The reason is that

during the day the inhabitants respire pure air, and during the night it circulates freely through their badly-constructed cabins, neutralising the foulness in which they are content to live. But in great cities like Glasgow there is no ozone-bearing air within miles of any part of it, and the houses are built of materials which render natural ventilation difficult. Then comes the packing up of the population into an incredibly small area, and the death-rate tells the woful result. There is no subject to which I look with more interest than to the results which may be expected from the vigorous effort which the municipality of this city has made in recent years to mitigate this evil. The example is already telling on London, and I hope that the efforts of my friend, Mr. Kay-Shuttleworth, and others, will be crowned with success next session, and that we will see a large effort to improve the dwellings of the poor in the metropolis. Light and air are as necessary to the dwellers in cities as they are to the trees of a forest. There you see trees, pining for air and light, push their branches in the direction of every inlet. In their struggle for existence many are dwarfed and come to nothing; a few, stronger and more robust in constitution, push aside the weaker, and appropriate the essential conditions of life to themselves. If the forest be under skilled care, the forester, with his pruning knife, cuts down the weak saplings, and leaves sufficient space for air and light to those of promising growth. But in an overcrowded city, grim Death with his scythe exercises little discrimination, and cuts down all those who come within its fell swoop. I have only alluded to the physical evils of overcrowding; but the moral evils are greater still. Although there is an excessive rate of mortality in overcrowded districts, there is no lessening of the population by such unhealthy agencies. A crowded and unhealthy district, with all its inevitable consequences of low morals and low intelligence—where the condition of human beings is scarcely above that of animals—where appetite and instinct occupy the place of higher feelings—where the barest means of support encourage the most improvident and early marriages—is not the place where we shall find a diminishing or even stationary population. For the early unions in such places are followed by early offspring; and although more than half that offspring may be swept away by disease during infancy, yet nearly a third of it will grow up in spite of all the surrounding evils, to follow in the steps of their parents, and in their turn to continue a race, ignorant, miserable, and immoral as themselves.

Next session the Friendly Societies Bill purposes to deal

with some of the many causes of juvenile mortality. The death-rate of children in a district is a sort of hygienic barometer of the surrounding physical and moral atmosphere. It is in a falling state in Scotland. The deaths among illegitimate children especially are on the increase. That is new in Scotland, but it is old in England. In some districts in London their rate of mortality when put out to nurse is 70 to 75 in the hundred within the first year, and in many manufacturing towns the deaths of illegitimates are 30 per cent. King Herod was not a more efficient baby exterminator than such hired nurses. But there are many moral causes of infantile mortality besides illegitimacy. When I reported on the hygienic state of the large towns of Lancashire in 1846, I was much censured because I dared to show by statistics that the children insured in burial societies died faster than uninsured children. That parents should neglect their children for their burial money is very horrible; but the conviction that they do so was strongly forced upon me by the evidence, and twenty-eight years later it is again forced on public attention by the far higher authority of the Friendly Societies Commissioners. In 1846 I also was distressed to find the use of opiates among children very prevalent in manufacturing districts. In this case the motive was not criminal, for the practice had arisen in ignorance of its bad effects. But it was not difficult to trace a large amount of direct and indirect mortality to this pernicious custom. Among children the administration of opiates, under the names of quietners and soothers, is nearly as destructive to health as the excessive use of alcoholic stimulants among adults. The craving for both arises from those depressing physical causes of disease which abound in cities. Dirt and drunkenness are often cause and effect. Indeed the physical and moral causes of disease are nearly as intimately associated as filth is with the entozoa of which I have already spoken. Shocking and repulsive as some of these causes are, especially in relation to infantile mortality, it is no use for us, like ostriches, to bury our heads in the sand and refuse to see them, for it is the relentless King Death who is our pursuer. I have sometimes been unwise enough to think that the enormous infantile mortality of our crowded places might be an important provision for securing a more healthy race of survivors in the struggle for existence. But a little reflection shows how untenable such a view is. We might as well suppose that the abnormal waste of a particular organ of the body was best fitted for the health of an individual as to consider that the increased mortality of un-

healthy districts in a town gave a superior race to its surviving inhabitants. No doubt unsanitary conditions first sweep off the weak, and those unfit to live under the continuance of existing causes of disease. But these become stamped at the same time into the organisms of the survivors, who carry them through inheritance into succeeding generations, though the original causes may have been removed. The survivors carry with them the seeds with which they have been impregnated during an unhealthy upbringing.

> A man, perhaps, the moment of his breath,
> Receives the lurking principle of death;
> The young disease which must subdue at length,
> Grows with his growth, and strengthens with his strength.

We are not always neglectful. Sometimes we look upon a human infant as a dangerous animal that may turn round and bite us when it grows up, and so we give some attention to the children of the dangerous classes, and try to tame them by improving their dens and educating them to a limited degree. But the children of the productive classes receive no such public care, and they grow up stunted in frame and of low productive value, because the State does not provide for conditions of healthy human development in crowded populations. If babies were pigs, or oxen, or sheep, the Vice-President of the Council would be daily questioned in the House of Commons if any unusual mortality came amongst them; but being only human infants, no one thinks of their welfare. Beasts, with a selling value, are taken more care of than men in free countries. I do not remember the proportion of veterinary surgeons to horses, and of surgeons to men in our own army; but I recollect that Chenu, in describing the late French war, said that every 1,000 horses had 4½ veterinary surgeons, while every thousand men had only two surgeons. If we succeeded in getting the dwellings of our working classes made as healthy as the cell of the felon—and surely that is not an unattainable luxury—eight years would be added to the productive ability of our working population.

I have mentioned various subjects in regard to which legislation is promised to us by the present Government, and I have no doubt of their desire to improve the condition of the people; but there is among their supporters a strong objection to increase local taxation, and without that large measures of improvement cannot be carried out. I should like therefore to show you by a single illustration how productive local taxation is. Sanitarians at present are inclined to believe that urban deaths need not not exceed 17 in the 1,000. But let us

assume, in the case of Glasgow, that its death-rate might be reduced to that of London—that is, to 22·4 in 1,000. In this case, the unnecessary and preventable deaths in Glasgow, as compared with London, are 3,817 annually. But these deaths imply a far larger number of cases of preventable sickness among the living. Statistical investigations made by Pettenkoffer show us that for every case of death in public institutions for the sick there are 34 cases of serious sickness, so that the 3,817 unnecessary deaths must be multipied by that number in order to give you the minimum cases of preventable sickness. These cases of sickness last on an average 18½ days. Hence the cases of preventable serious sickness taken at only two shillings a day represent an annual cost to the city of Glasgow of £240,000. This, however, represents only a portion of the interest of money which might be well spent in paying borrowed capital for the improvement of the city. I put this for the present purposely on the mere money aspect of the question. Franklin's aphorism, "Public health is public wealth" is true even in its more vulgar meaning. Whether the saving of life of human beings, with higher hopes and aspirations than existence in the world, is to be appraised on a mere money standard, is quite another question. But my object is simply to show that taking the smallest part of the money saving, it is obvious that money judiciously spent in sanitary improvement is not unproductive taxation, but capital bearing abundant interest.

I began by discouraging statements of our slow progress in the improvement of the country as a whole. As regards Scotland, indeed, I had to admit that the causes of deterioration are still more powerful than the means of improving the social condition of the people. If I understand my countrymen aright, the conviction of this fact will not render them hopeless, but will stir them to new exertions. Yet I would not take leave of you without pointing out that there is abundant proof that sanitary measures are producing great results when well applied. Take the case of the army, for example. About twenty years ago, if my memory serve me right, I was a commissioner of enquiry into the hygienic condition of military barracks. Then their ventilation was in a woful condition. I spent various nights in the sleeping-rooms of the soldiers, and found all the hygienic arrangements deplorably bad. Since the Crimean war, the military authorities, aided by the excellent hygienists among the medical officers of the army, have placed the health of the army in a much more satisfactory condition, and the result is

that the mortality of the army is now less than half of what it was before the war. But it is not in our army alone that such results have been produced. Formerly the deaths from sickness in campaigns were four times greater than the deaths from wounds. Every campaign now lessens the proportion, because the sanitary conditions of the soldier's life both in peace and war is much better attended to. In the last war the German troops lost less than a third of their dead by disease, while formerly the loss had been four times that from wounds. The following figures give the deaths from disease for every hundred men lost in the campaign:—

French in the Crimean war	79
United States troops in American war . .	80
Germans in last French war	29[1]

The small loss from disease as compared with wounds in the French war, promises much for military hygiene in future campaigns. In the Crimean war, after the sad experience among our own troops owing to defective sanitary organisation, we sent out a sanitary commission and improved the hygienic condition of our troops, while France failed to do so. And the final result, according to Chenu, is that while we lost 12 in the 1,000 of our men, France lost 155.

Formerly the rate of mortality in the chief towns of British India, such as Calcutta and Bombay, was appalling; now, by hygienic improvements, and in spite of the tropical climate, it scarcely exceeds that of Manchester, Liverpool, and Glasgow.

If I had time I could quote to you many cases in England where sanitary constructive works have largely reduced the mortality, but I have taxed your patience too long, and must now draw to a conclusion.

I have indicated the promises of sanitary legislation which have been given to us by the present Government, but to none do I attach more importance than a reorganisation of our system of local government which the Conservatives are bound to attempt. If wisely done, its consequences may be immensely beneficial. In England, at the present time, there is a casual agglomeration of 1,500 separate sanitary authorities, without system or cohesion. Their areas of administration are diverse in the extreme, being neither bounded by counties,

[1] In the Crimean war 95,000 French died—75,000 from sickness and 20,000 from wounds. In the American war the United States troops lost 42,010 men from sickness, and 10,142 from wounds. In the late French war the Germans lost altogether 40,881 men, of whom only 12,253 died f om sickness.

parishes, nor natural watersheds, and their duties are divided without meaning between authorities in the same district. They have been lately put under medical officers of health without preparation or qualifications for their duties, some well paid and devoting their time to this important work, others having little more than nominal payment and giving little more than nominal time to their important duties. Notwithstanding this too sudden and unprepared universal appointment of medical officers, yet in the administration of the Health Acts there has been recently manifested a disposition to "distrust the doctors" and to work the Acts, at least at head-quarters, by lawyers and other persons not connected with the medical profession. This is the old error of making common sense the fetish for worship, which Archbishop Whately and others have so effectively condemned. Even the most fervent worshipper of common sense, as opposed to technical training, never relies on it in important emergencies of his life. He goes to the lawyer to make his will or to convey property; he consults the parson on religious doubts when on the sick bed; and he does not spurn the doctor to cure him of his grievous ailment. But it is well known that the Local Government Board are afraid of the doctors in the administration of Health Acts. Who beside them possess the knowledge? I can testify, from an experience of thirty years in sanitary work—and impartially because I am not in the medical profession—that there is not a class of men in the country who labour so zealously for the prevention of disease as the doctors, though their training hitherto has been cure, not prevention. Certainly their private interests have never been allowed to stand in the way of their efforts to uproot disease, although their living depends upon its existence. This unselfishness in the application of their science to prevention has always been to me a source of high admiration. Why, then, is there this vulgar distrust of the doctors in the administration of our Health Acts? Extend this prejudice against technical knowledge, and how absurd it would be. Would you improve the progress of telegraphy in this country by suppressing electricians: or the law and justice of the country by putting down lawyers? Would the Secretary at War promote the conduct of war by suspecting soldiers; or the First Lord of the Admiralty the efficiency of fleets by distrusting sailors? Would our railroads and harbours be better governed if engineers were held at a discount? But this is actually the state of things at the Local Government Board—the Health Ministry of the country. The Privy Council handed over to that Board Dr. Simon and his associates, with a wealth

of medical experience in public hygiene. Ever since, that wealth has been locked away from public use. Certain I am that their experience could not have guided the Board in the utter confusion of organisation in regard to medical officers of health. They have been appointed without any system. Some have a small parish to attend to, others have a thousand square miles. The last are appointed for combined districts, but are managed by uncombined authorities, and have neither assistants to aid them nor power to enforce their decisions. The officers of health are without any definite rule for obtaining available knowledge of prevailing sickness, even when it is treated at the public expense within their own districts; and they are not, universally at least, informed of the deaths as they occur. The medical officers of health have been appointed without any examination on their knowledge of state medicine, and in the majority of cases they do not possess this knowledge. I am perfectly certain that this utter confusion could not have resulted had the Local Government Board consulted the experienced State medical officers belonging to them. This distrust of the doctors in higher administration is simply a general mistrust of science. And the time has now arrived when science must be trusted in government. Science is entering into the higher education of the country, and the prejudice against it among legislators, who were educated in classical universities, will in time be removed. For the progress of a country depends upon the progress of science, and the welfare of a nation is secured by the most intelligent application of science to its manufactures and to its government. The health of the country—and that governs the productive power of its people—depends as much upon the applications of medical science as the working of a machine depends upon a good application of mechanical laws. To trust the whole administration of Health Acts to poor law inspectors and lawyers is an amazing example of unbelief in the first principles of the laws of health. The well-being of the people depends upon physical causes, which, when intelligently understood, mean physical science, and the trained physician is the natural and most intelligent agent for extending its knowledge and application to the prevention of disease.

What we want in the future is not new law, but more efficient administration of existing law. To heap up new sanitary law on the decaying mass of indigested sanitary law which already forms a dismal agglomeration, is like the practice of our ancestors, who thought that a few clean rushes, thrown upon the corrupt mass of foul rushes on the

floor, sufficed for sanitary purposes. What we want is superior organisation and efficient administration of existing law. But, in our happy-go-lucky style of government, are we likely to get it? I doubt whether it will be wise to continue the local government as a separate department of the State. Its functions in reality appertain to the Home Office, which, when properly organised, should divide itself into two great departments—the one dealing with police and justice—the other with the physical interests of the people. One Secretary of State might have the supreme responsibility, but each of the divisions should be scientifically administered. It would be as absurd to put a man trained in physical science at the head of the branch of police and justice, as it is to put a man merely trained in law in charge of the physical interests of the people. It is an exploded fallacy that only lawyers are good men of business, and that scientific men are not. Is my friend Sir John Lubbock a worse banker because he is an eminent man of science? Is Mr. Spottiswoode a worse printer because he has distinguished himself as a physicist? Is Mr. Warren De La Rue a worse stationer because he is equally conspicuous as an astronomer and as a chemist? The local government of the country, in as far as it relates to the physical interests of the people, will remain an example of arrested development, unless science receives a recognised position in its administration. Now, the Local Government Board is drifting into the position of a large and responsible ministry dealing with the physical interests of only one portion of the people, and having no imperial object or comprehensiveness; for though it includes England, it excludes both Scotland and Ireland.

I have already shown that the sanitary conditions of Scotland are deteriorating, while those of England are improving. The natural course of administration, then, should be to bestow upon the former even a greater portion of ministerial care and responsibility; but it receives none at all. The time may, however, arrive when English legislators will remember that there is a certain portion of Great Britain to the north of the Tweed, and that its local government, as well as that of England, is worthy of imperial care. In questions of such imperial importance as education and public health, it is a foolish policy to treat the three parts of the kingdom by fragmentary and unconnected legislation. In relation to sanitary questions, public conscience has been recently much aroused, and will ultimately obtain attention to its calls. No doubt sanitary science, both in the abstract and in its application is, like many other sciences, of slow growth. The

crop of truths, which we are now harvesting, results mainly from seed sown by our forefathers. The seed which we ourselves may throw upon the waters will assuredly come up into a harvest, though it may not be for many days. But he who will not sow for futurity deserves nothing from the past. It is our duty to labour for a future which we may never see, and not merely to live on the wealth of accumulated experience, as the heir of riches does when he uses them for himself alone. This Association contains many missionaries for the propagation of sanitary knowledge. Their mission is to stand between the living and the dead, and bid the plague to cease. There have been times when a Scotch professor like myself dared not have preached such doctrines in Scotland; for his countrymen once hugged the belief that pestilences were divine judgments, which ought not to be interfered with by human agency. Even then they forgot that there is far more of mercy than of wrath in all divine arrangements. Undoubtedly pestilences are warnings that man is transgressing the beneficent laws provided for his well-being. But a god of wrath and pestilence is now a god of the heathen, not of the Christian. That ought to to have been understood long ago. The prophet heard the wind which clave the rocks, but the voice of God was not in the wind. He felt the earthquake which shook the world, but the voice of God was not in the earthquake. He saw the fire, as it pursued its track of desolation, but the voice of God was not in the fire. It was only after these terrors had passed away that the prophet heard the voice of God as a still small voice. That whispers to us still, not in plagues and pestilences, but when these dangers have passed, as an ever-present voice in all the ordinary occurrences of our lives. It tells us of the beneficent wisdom which regulates all the laws of creation made for our well-being, and not for our destruction. It is by disobedience to them that we are punished by 125,000 persons being unnecessarily cut off every year in this country. Our own acts produce those demons of destruction which the Jews of old credited with the slaughter of the people, and by our own acts we can convert them into preserving angels. I think it is in the epilogue to "The Honest Man of Fortune" that Beaumont and Fletcher thus describe our responsibilities for what befalls us:—

> Our acts our angels are, or good or ill,
> Our fatal shadows that walk by us still.

The object of the health section of this Association is to show our countrymen how this sacrifice of preventible deaths

may be avoided. That number of deaths imply more than four million two hundred thousand cases of preventible sickness. It is upon these that we must operate, by rooting out the causes which produce them. I began by drawing your attention to the death-rates of the country. These have been derived from the excellent system of death-registration which we now possess. But there is another system of registration which it would be important to add to our sanitary records—the registration of sickness. Registration of deaths represents the wrecks which strew the shore, while that of sickness would tell us of the coming storms and enable us to trim our vessels to meet them. Till we have such a system of disease-registration, public health cannot be administered with full intelligence. We must not forget that the function of the sanitarian is prevention. His function begins and ends before man reaches his final state of decay, "or ever the silver cord be loosed or the golden bowl be broken . . . or the wheel be broken at the cistern." When this wheel, or circulation of the blood, is broken, a new and a great wheel begins, involving in its rotation all organic and inorganic matter. In this there is the highest example to us of hygienic organisation. You know how the waste of animals during life, and of their bodies after death, passes into the gaseous forms of carbonic acid water, and ammonia. These substances form the aerial food of plants, which, in fixing and moulding some of their constituents into new forms of organic life, purify the atmosphere of its noxious products, and restore the life-giving oxygen abstracted in the respiration of animals. Thus plants convert the foul products of animals into new food necessary for their growth and development. The great and abounding air into which passes all the foulness of the living, and all the putrid products of the dead, becomes at once the grave of organic death and the cradle of organic life. In this wonderful circle death and life rapidly appear in correlation; and past generations of animals, by a process of dissolution, produce living generations by a process of evolution. All this is in the harmony of nature, without jar or disturbance. We should strive, in our hygienic efforts, to take part in this great circle, without vainly attempting either by ignorance or by design to mar such wonderfully conceived plans for preserving the world in purity and sanity.

FELLOWS' LIBRARY ASSOCIATION SAN FRANCISCO, CAL.

Address

ON

ECONOMY AND TRADE.

BY

SIR GEORGE CAMPBELL, D.C.L., K.C.S.I.

I HAVE been so much and so actively engaged abroad that I fear I am but ill qualified to speak of this great subject. I must confine myself to some general observations which occur to one, who from a distance has had what may be called a sort of bird's-eye view of events passing in Europe; and I think that you will view leniently my shortcomings and errors.

It seems to me that the pervading element in recent changes of opinion on economical questions is a certain distrust of the orthodox doctrines of political economy such as were at one time received—a recognition of considerable disturbances and wide deviations due to what I may call moral causes. It has come to be understood that in practice men do not always, or even generally, follow the strict paths of pecuniary self-interest, and that in dealing with human affairs we must make large allowances for certain attractions not originally taken into account in the science of political economy. In fact, pure political economy has been to a great extent supplemented by what may be called mixed political economy.

I would class the disturbing causes under the heads of, first, habit and custom; second, ignorance and prejudice; and third, the fact long preached, but little accepted in modern days, that wealth and happiness are not always commensurate; since it may be that a smaller total of wealth distributed one way or under certain conditions may afford more happiness, and consequently be more sought after, than a greater total of wealth distributed or accumulated in another way. I think we can have no true economical science without recognising that the

result depends quite as much on the distribution of wealth as on its actual amount. The fact seems to be that in primitive times, before wealth was so great and before economy had been reduced to a science, the wisdom of our ancestors recognised and acted on many of the considerations which, in later days, we have overlooked; and along with much gross error and prejudice they had some elements of social well-being and happiness which have been comparatively wanting in modern times. Hence arises a sort of radical reaction—a disposition on the part of some of the most advanced reformers in some things to revert to earlier phases of society, when wealth in the hands of individuals was less exclusively king; when castes and classes were less widely separated; and when institutions prevailed which admitted greater numbers to the privileges and enjoyment of property or of common rights.

Taking in the order in which I have stated them the classes of causes most likely to disturb the rules of pure political economy, I will not here say much on habit and custom, though in truth custom is of enormous importance and greatly influences most affairs. It is abundantly evident that these things do very largely affect human action, even in the most civilised countries; and no man can be a true statesman who makes his calculations without allowing for their effect. So long as human nature is human nature, men, and still more women, will be influenced by habit and custom.

Mere ignorance is perhaps scarcely so important, inasmuch as while the influence of habit is perpetual, ignorance is an ice-bound form which melts and disappears under the influence of the sun of knowledge, which in these days is melting with great rapidity, and which modern advances seem likely very rapidly to reduce to a minimum.

The grand difficulty in establishing a free and good social state in these days seems to me to consist in this, that up to this time almost all, if not all, the examples of successful free states are states in which real freedom has been confined to a body of freemen—a very large body, even a majority of the population, it may be, but still an exclusive body, not comprising the whole population. The menial and inferior duties have always been performed by a helot population—either actual slaves, serfs of the soil, or persons nominally free but really by gross ignorance kept down to a quasi-helot position. The old republics of Greece and Rome had large bodies of slaves; so had the American Republic till the other day. In the middle ages the free nations of Europe seem always to have dominated over subject races of serfs. On the Continent many

of the people had not fully emerged from that state till modern days. In England till quite the other day the agricultural labourer was a rude and ignorant serf, debarred by ignorance from any effort to improve his condition. Even in educated Scotland we are told that in comparatively recent times miners were almost or quite slaves; and I believe I am right in saying that in modern times, in this manufacturing West, the lower kinds of labour in the great industrial establishments are for the most part not done by Scotchmen, but by strangers imported to fill the gap left by the *want* of ignorance in Scotland.

Even in Scotland we now know that a good deal of ignorance has remained. But in Scotland, England, and Ireland too, measures are taken which will render the people no longer ignorant, and we must make up our minds for the changes necessarily resulting. Not only education proper, but those great educators, railways and steamships and the press, are rapidly bringing things to that point that ignorance will no longer render easy bargains for the performance of inferior toil.

When the ignorance which maintains a pariah caste is dissipated we come to that state of things which already to a great extent exists in America: among equals no one will submit to do the inferior work except for very high pay. Hence a social revolution, which we are now going through. It may be doubted whether the effect will be to raise the comparative position of the aristocrats of manual labour, the skilled mechanics; but we certainly witness a process which must be lasting, viz. the comparative elevation of the wages and positions of the labourers who perform the more disagreeable and inferior labours.

This seems to me to be one of the causes of recent changes and rise of wages. Another is, no doubt, the increased facilities of emigration, the consequent drain to America, and the tendency to an equalisation of the conditions of the labourer in Europe and America.

How far, then, is the change to go? Is there a limit to it, or are wages to go on rising indefinitely? I think those who are too sanguine in their anticipations of continued improvement in the position of the labourer must remember several drawbacks. Every great rise in the price of production must tend to check that great development of our manufactures and trade which has hitherto more than kept pace with the population. Under improved conditions of life we may expect that population will continue to increase very rapidly. And there seems much reason to believe that the flow into America has

already gone far to reduce the difference of level which has hitherto produced so strong a labour-current to the West.

But beyond these considerations, which most of you understand better than I can do, there is another to which I would particularly ask your attention, and in regard to which I can speak with more personal knowledge. These countries of Western Europe are not the only or the chief labour-markets of the world. On the contrary, in Southern and Eastern Asia we have a population infinitely more numerous, and where wages are out of all comparison cheaper. It may be that the same influences which tend to spread populations and equalise wages as between Europe and America may soon tend to produce the same effects as between Asia and the countries where labour is now dear. Already Chinese labour has come into competition with white labour, and it has become evident that the Chinese are no mean competitors.

In truth the same causes—prejudice and ignorance and want of means of communication—which have hitherto kept in degradation much of the populations of Europe, have also kept cooped up in their own country, at humble labour on low wages, the great Eastern populations. Wherever there is peace these populations increase; and if the bonds which have restrained them are relaxed they may greatly affect the labour markets of the world.

The Chinese have a physique very little inferior to Europeans, and they have an industry and perseverance superior to many Europeans. They have hitherto been much restrained by political circumstances and social bonds; otherwise they are singularly free from any trammels of ignorance and prejudice. I have often inclined to think that if the gates of China were fairly opened it would be a question whether the New Worlds are to belong to the Americans or to the Chinese. The success of the Chinese as colonists is mainly retarded by one social prejudice—they do not like to take their women abroad. But I believe there are symptoms that this may be overcome, and if so I do not see what there is to prevent the Chinese from multiplying and replenishing the earth.

Then we come to the vast populations of our great Indian territories. Recent events have created a painful interest in the density and the rapid increase of these populations. More and more this country seems to feel that, having undertaken their government, it is our duty to do what we can to facilitate their employment in a way which may mitigate the evils resulting from overcrowding, uniformity of labour, and lowness of living. There are still large parts of India in which the

wages of a labouring man are not more than 2½*d.* per diem, and 3*d.* is an outside wage in all the rural parts. Whether we facilitate a change or not, the world is progressing, and there is some probability that many of these people may come into the labour market of the world. In their case pre-eminently it is prejudice and ignorance which have kept them back. Caste prejudices are being weakened. We are doing much to educate the people in India. Unheard-of facilities of locomotion are there provided. In several parts of the country the people are becoming accustomed to emigration. There seems no reason why at least our warmer colonies and possessions should not be fully colonised by an Indian population. And it may be that even in our own country, if our own populations are elevated to occupations requiring energy and force, some of the inferior occupations may be taken by our Indian subjects. For instance, I think that in these days domestic service is not the work of European men. As things stand I would give that over entirely to women; and if the women are too much for us, I believe that Indian servants, educated in this country to our habits and our energies, would do that duty excellently.

These Indians, though sprung in the main from the same original stock as ourselves, are now undoubtedly inferior in physique; but their intellect is good, and their manual skill great, and the experience of individuals proves that they are quite capable of thriving and improving in this country.

Emigration moreover apart, much attention has lately been drawn to the fact that in their own country Indian labour in manufactories threatens a very dangerous competition with the manufacturing labour of this country. There is no concealing the fact that, inferiors though they be in force and energy, the natives of India are just as well fitted as the people of this country for the kinds of work which are connected with machines. I have specially inquired on this point, and am told by those who have practical experience of the great mills recently established in India, that the natives do the work on which they are employed (that is, the manual labour) just as well as Dundee or Manchester hands. They have a distinct aptitude for this kind of thing; and I have never seen a pleasanter sight or a greater improvement in condition than is exhibited by large numbers of native men, women, and children employed in some of these mills. As yet, both in the jute mills of Calcutta and the cotton mills of Bombay, only the coarser fabrics have been attempted; but considering how recent this industry is, it may well be that great advances may soon be made. In some respects

Indian mills labour under a disadvantage: coal is dear or inferior, European superintendence expensive, machinery must be obtained from a distance. Still the tendency must be to diminish these difficulties as mills become more numerous and Indian minerals are more developed. I have no doubt many here can calculate pretty exactly what proportion to the whole cost of manufacture is represented by the cost of manual labour. It is certain that this labour is very much cheaper in India; and weighing that against the advantages on the other side, some opinion may be formed of the probable success of Indian manufactures. So far it is certain that they have given ground for sanguine expectations, and that consequently large additions are being made to the existing manufactories. A question has been propounded to you: "What are the probable effects of the spread of manufacturing industry in Europe on the future commercial prosperity of the United Kingdom?" and I beg to impress on you that the question must be extended to India, and that you must consider the possible effect of the spread of manufacturing industry in India. You are probably aware that at this moment the jute mills in and about Calcutta are being largely extended, the existing mills having been found remunerative in a very high degree. Some cotton mills are also started there, while at Bombay a great increase is taking place in the large cotton mills already existing, and cotton mills are started at several places in the interior.

This train of thought leads me to another of the special questions which will be propounded to you: "What are the best means of drawing together the interests of the United Kingdom, India, and the Colonies?" I think that in discussing this very wide question a great distinction must be drawn between the self-governed Colonies, on the one hand, and India, with other native-inhabited and Crown-governed Colonies, on the other. In the latter we must do what we deem best in the interest of the colony or dependency, and in that of the Empire at large. But in the case of self-governed colonies it seems now to be accepted that freedom must prevail over the economical views which we may consider right; that they must do as they like, and that we must trust to the taste for British beer, British manufactures, and British mercantile connections, which British colonists carry with them, for any direct benefit to repay the money expended on these children of the mother country. My own view, subject to what I may hear at this meeting, is that self-government should not be conceded too early; that there is no reason why a handful of first colonists should dispose of great countries to the prejudice of those who come after them;

and that the natives, if there be natives, must be fairly protected. But when a colony of British blood has become populous and settled, and self-government is conceded to it, I think that any attempt to maintain too close a connection with the mother country only leads to evil and bad feeling. All over the world I believe experience shows that highly centralised free governments do not succeed on a large scale—freedom is only possible on a large scale under a federal system, closer or loose as the constituent parts are near and similar, or the contrary. But be this as it may, I am firmly convinced that the British genius is not centralising, but of an intensely local and decentralising character. I observe that the moment a man born and bred in these isles settles in a colony or dependency he ceases to put first the feelings of an Englishman or the interests of the Empire—he becomes intensely local in all his views and interests—he is always ready to decry the interests of the mother country as opposed to the local interests which he has espoused—he is very touchy and difficult to deal with. For this reason especially I greatly distrust all plans for Imperial Assemblies to represent the whole Empire, and every scheme of that kind. I believe that it must come, and is coming to this—that when self-government has been once conceded the interference of the British Parliament must almost cease, and we must be content to maintain as long as conveniently may be a loose political connection through the Crown or head of the State. The head of the State would then act as arbiter, and exercise an influence sufficient, it may be hoped, to settle disputed questions and maintain concord for a generation or two. But colonies are like children; and when an elder child, such as Canada, has grown to maturity on another continent, has its own politics, connections, and complications there, and is practically out of our hand, I would certainly let it go free without more delay, and would relieve this country of the many embarrassments to which the connection may give rise. We may hope for long years of friendly intercourse with free colonies and colonies emancipated into free countries, if we only follow a negative policy, and keep clear of causes of offence. Canada I believe to be, under present arrangements, a burden and a risk to us. The Australian Colonies are differently situated, and a direct connection with them may no doubt be advantageously maintained for the present.

One of the best means of uniting the mother country with the Colonies is no doubt the extension of telegraphic communication, and it is to be hoped that this will be gradually

perfected. Especially in all directions we must hope to obtain cheaper telegraphic rates than those now charged by monopolist private companies. The rates on the ocean telegraphs are almost prohibitory to private correspondence.

In regard to India the character of our connection is very different from that of the free colonies. Possibly we may some day fit that country for freedom, but the time has not yet come nor approaches when we can carry political freedom there beyond small local municipalities. The best, then, that we can do, whether for the interests of the United Kingdom or of India, to unite the two, is to govern India absolutely with wisdom and justice. Above all things we must give the greatest possible facilities to promote the flow of those things in which each country abounds to the other. Though I am old-fashioned enough to believe that even the rule of free trade has its exceptions, though I have thought that when actual famine of a severe type is on a country, its rulers may fairly retain its own food supplies, I heartily acknowledge that, as a rule, the freest exchange of commodities is incomparably the best system, and that the first duty of a ruler is to promote that exchange by liberal tariffs and liberal laws—by improved harbours, roads, and railways—by easy markets and other mercantile facilities, and by the industrial education and enlightenment of the people.

Now, we know that India is rich in a great, an industrious, an intelligent, and an orderly population, and in a vast extent of rich soil, made fertile by a tropical sun and almost tropical rains; but she wants capital and science, and energetic directors of labour. All these last the United Kingdom can above all other countries supply, and above all other countries the United Kingdom can take and use and improve the great products which the soil and populations of India supply. It must be, then, that two countries, each of which is as it were the converse and complement of the other, must, when brought into so close relation as are India and this country, benefit one another. The interests of both are the same; the measures that will promote the interests of the one will promote the interests of the other. The task of the Government is but to study the common interests, to remove obstructions, to maintain peace and quiet, and to let things find their natural level.

This country is full of capital. Much of that capital must and does find its way to India. Yet it is often said that capital does not go so freely to India as to some other countries. I believe that the way to an influx of British capital into India is more

and more opened every day. But to secure the most abundant flow possible I think we want—

A better definition of the rights in land.

Improved judicial institutions.

An improvement in the English commercial law better calculated to secure honesty on the part of agents and directors.

Improved facilities for the resort of Europeans to the better hill climates of India, facilities for their settling there, and facilities for the education of their children.

An improved social intercourse between Europeans and natives.

I find that perhaps the greatest difficulty we have now to deal with in European industrial enterprise in India is that too great haste to be rich which leads men to be constantly seeking short cuts by speculation rather than to settle down and slowly build up fortunes founded on the goodwill and co-operation of the natives, as the old race of settlers did. The greyheaded old planter, wielding an immense personal influence over the natives around him, is now very rare. Our nation has been demoralised by prosperity and speculation—tea industries and other industries have received rude shocks, and been much retarded, because many men have made tea-gardens and set up other enterprises, not to make tea or anything else, but to sell. In most industries we have now a healthier state of things, but still there is too much of a feverish expectation to make a rapid fortune in a few years as soon as a first success is achieved. I think that to secure steady and sure success planters and settlers must make up their minds to spend the best part of their lives in the country, as Government servants do, to learn the languages, to conciliate the natives, and to make for themselves a place in the country. Certainly the most successful men in the long run are always those who get on best with the natives.

I have not mentioned public works and improved communications as one of the improvements required in our Indian system, because I feel that we are already sufficiently alive to the need of these things, and are already doing as much as can reasonably be expected. On the other hand, I think there is extreme need of caution lest we should go too far in a right direction, and too much embarrass our finances by unprofitable works. In respect of improved communications we can hardly do too much, and much has been done. The railways already made in India are on the whole a great success; the trunk-lines carry a very large traffic; and though very expensively built, pay quite as well as could be expected. The greatest

railway of all, the East Indian, is already a paying line, and so is the Eastern Bengal. If we can succeed in making cheap light railways as feeders to the main lines—so cheap that they will pay tolerably well—we shall have an excellent railway system in India. Already some such cheap lines have succeeded; and if in the future we lay them down judiciously, and avoid a too broad gauge, on the one hand, a pedantically narrow gauge, on the other, we may well succeed with such works on a large scale. The difficulties in the way of large and substantial metalled roads in the plains of India are enormous—they are most expensive to make, and most expensive to maintain; it is therefore that I so much look to light railways.

In connection with this subject it may be mentioned that there is very widely spread in India enormous quantities of excellent iron ore. The coal is not so good, but it is tolerable, and in some parts there are great quantities of it close to the iron. If iron should become excessively dear in this country, a successful iron manufacture on a large scale will probably spring up in India. I understand that even now projects of this kind are on foot in a part of the country where there seems to be very great promise of success.

Railways cannot go to every village: we must have local roads of some kind, and the Indian Government certainly does not neglect this subject. There is generally a system of local taxation for roads; and of late in Bengal, where the permanent settlement was by many supposed to cause difficulty, a system of local rating for roads has been carried through, and put in practice with unexpected success.

There is, then, no laxity in providing India with sufficient means of communication. In respect also of accommodation for shipping much has been and is being done. I am sure those of my mercantile friends who are connected with Calcutta will acknowledge that there at least we have lately given them modern appliances and facilities of the best description, and suited to the great steam traffic by the Suez Canal, which is every day developing, and which will more develop, if only care is taken that the ships are properly navigated. In almost every one of the many cases in which fine steamers have been lost on this route of late the result has been due to no storms or other natural misfortunes, but simply to gross blunders of navigation. Surely these may be avoided.

You are well aware that great efforts are made to increase the productive power of India and secure the country against famine by means of irrigation. I trust and believe that much

may still be done in this way. But the misfortune is, that on Indian subjects public opinion in this country is apt to rush to extremes. It seemed at one time to be supposed that irrigation of any kind and at any cost must be the panacea for everything. In truth there are two sides to this irrigation question, and questions of extreme difficulty are involved, which can only be worked out with extreme care and patience. I earnestly trust that the new Minister of Public Works in India will be a careful and a patient man, who will go thoroughly into these questions and work them out thoroughly.

By other means also the productive resources of India may no doubt be increased. But here also we must not rush to too hasty conclusions. The natives of India, knowing their soil and climate, cultivate with a considerable skill and success, which we certainly cannot improve by rude and hasty means. To improve Indian agriculture and Indian staples we must give to the subject the utmost care, study, and practical application. I think that we ought to have a far better knowledge of the products and agriculture of India than we now have, and I trust that steps are being taken to obtain this. We are attempting to commence schools of practical botany and agricultural chemistry; we hope to have an industrial survey of the whole country. I hope and believe that the result will be in the end a greater supply of the products most wanted in this country and increased prosperity to India.

I have mentioned improved facilities for settlement and education in the better hill climates of India as one of the desiderata. I have doubts whether we can ever do justice to India till we have some sort of colonisation there under circumstances in which the race will not deteriorate. We want a class who may become a sort of medium between ourselves and the natives, and bring the two races closer together, instead of letting them drift farther apart, as is now, I think, the case. I have alluded to the decay of the old race of planters and settlers and the substitution of young men too sanguine of becoming rapidly rich and going off again. Even among the servants of Government a good deal of the same feeling has resulted from change of system and increased facilities of communication with Europe. I want to tempt some Europeans to make India more completely their home, and to bring up children who may combine with European habits of thought and feeling a thorough knowledge of the natives and of native languages. I want a class of Europeans who understand the soil, the agriculture, and the products of the East, and who, with a European education, may be able to improve them. I also

especially wish to develop among the better and highly-educated classes of natives a physical robustness and a taste for practical arts, which may enable them to do for their own country what energetic and educated men have done in Europe. I trust that we have made a beginning in this direction, and that good fruit will soon come of a friendly and efficient working together of European and native energy.

I have not yet touched on the third of the causes of variation from the strict rules of pure political economy which I stated, viz., the possibility of greater happiness resulting from an advantageous distribution of wealth as distinguished from its gross amount. It is generally, I think, deemed to be a source of weakness and social evil in this country that there is a tendency more and more to accumulate wealth in few hands and to divide the population into a few who have very much and the many who have nothing. I am myself inclined to think that we too much tend to substitute a plutocracy for the aristocratic rule, which has in great degree ceased. Be this as it may, I think there can be no doubt that a great source of weakness in this country, as compared to some other countries, one which may give them the advantage in the long run, is the want of saving accumulation and property among the labouring population of England, and I fear I must say of Scotland also. We now know that, if the large capital of France is not so large as ours, the amount of wealth in France in the hands of petty holders is enormous. In other European countries also the people are, I believe, saving in their habits. Even in Ireland we know that the petty cottier tenants save money to buy farms and give their daughters portions in a way which, I fear, is very rare among British labourers. Why is this? The Scotch, at any rate, are by nature a prudent race. Why do Scotchmen earning good wages in our manufactories not save like Frenchmen or Irishmen, and buy fields and houses and stocks and shares? I imagine that in Scotland we have now become involved in the English system, and that the English system is not favourable to saving. Englishmen and most Scotchmen have been too long divorced from the responsibilities of property and of complete self-dependence. I take it that the more people cease to work for themselves and become labourers for others, the less the necessities and forethought which beget prudence influence them. When a man cultivates a bit of land on his own account, or carries on any trade on his own account, he must look to the vicissitudes of season and the market. He cannot live from hand to mouth from day to day or from week to week. He must have

either money by him or credit to enable him to tide over a rainy day, a bad harvest, or a bad market. The necessity of the case forces him to be prudent and forecasting, and a man so situated generally is so.

On the other hand, a man who receives a weekly wage is too apt to spend it and to trust for the next week to the wages of the next. I believe that in other countries also, as the system extends under which the mass of the workmen are labourers without responsibilities, so also prudence diminishes; and I apprehend that by far the greatest question of modern days is, how to reconcile a great manufacturing system with prudence—how to give the workmen a sufficient interest in the produce of their labour, a sufficient incentive to exertion, and a sufficient motive to prudence. I do believe that for many reasons 1,000*l.* saved by ten workmen is more valuable to the country than 2,000*l.* saved by a capitalist, and that a thousand houses and gardens owned by labourers contribute far more to the safety of the country, to the security of property, and to a wholesome social state, than one great estate owned by one man. There is, after all, no conservative force so great as the possession of property by a large proportion of the people. It is the old story of a broad basis instead of a body balanced on its apex. However large the increase of wealth accumulated in masses, however much the workmen may have to spend, no system can be safe or prudent which does not in practice promote economy and prudence among the labouring classes.

In this respect I believe that the British labourer lies under a special and peculiar disadvantage. Men are seldom prudent in the abstract; they must have before them some visible, tangible, and highly-prized reward for which they strive. In countries where the land is much subdivided, where petty holdings and houses and gardens, such as the labourer can hold and enjoy, are very numerous and always in the market, the labourer strives for the possession of such things. The French or the Belgian peasant or labourer longs to become a proprietor, the Irishman to acquire the tenant-right of a small farm. In countries where the public loans and the shares in joint-stock enterprises are arranged to attract petty holders, petty people are found to take them. But under our English system, the land is daily more and more massed by the very rich—comparatively little that is successful has been done to make it accessible to the poor. Our public loans and our enterprises are managed by capitalists and financiers; the poor have little temptation to engage in joint-stock enterprises, and our commercial laws give them little security that they

will be fairly and honestly treated if they do. Certain it is that the more wages are received the more is spent, the more the revenue derived from spirits and such things increases. There is not at present sufficient inducement to prudence and saving.

I believe, then, that our future more than on anything else depends on the solution of the most difficult problem, the reconciling of labour, for or under the guidance of capitalists with prudence on the part of the labourer. We must, if possible, so arrange our land laws that garden-plots in convenient situations may be easily available to the industrious mechanic. We must so arrange our associated labour that the industrious and energetic man may earn in proportion to his industry and energy. We must so regulate the laws under which money is invested in industrial enterprise that the small holder may be secure of fair treatment and have fair expectations of a good return. In one shape or another, if this nation is to hold its own, we must give sufficient facilities for and inducements to prudence and saving.

These are heavy and difficult tasks. Success will only be achieved after many attempts and probably many failures. And here I must avow my belief that the Imperial Parliament, as it is now constituted, is not capable of efficiently dealing with the many social problems which present themselves, and of effecting the many reforms which we require. I have already said that I believe a highly centralised system in a great State is not compatible with freedom. Every day it becomes more and more apparent that our Parliament is far too large and unwieldy a machine to deal with all the requirements of modern society. When great measures and great experiments are necessary we find its time frittered away on small measures and local measures. Mr. Gladstone's Ministry was at any rate one of energy and action—politicians of one school say too much energy; but all the vigour of its youth and the strength of its majorities were spent on measures wholly local to Ireland, while England and Scotland were comparatively neglected. By the time that the attention of that Ministry was turned to Britain its forces were in a great degree exhausted. Another Ministry has come into power, with a great majority, but the result of the session has shown how little can be done. The machine is too large and too cumbrous. Believing, then, that the social reforms which we require must necessitate many experiments in many directions; that to effect them we must enlist local experience, local energies, and local interests; that one Parliament cannot do this, but that localised institutions may do it, I am so far a

Home-ruler that I should like to see a large portion of our self-government transferred to local assemblies. In this respect at any rate I would in a great degree imitate the American system. I think that very much of the management of Irish affairs might be transferred to an Irish House of Representatives, or probably rather to two separate Assemblies, representing two Irish provinces, North and South. I think that a very large portion of our Scotch affairs might be much better managed in a Scotch Assembly. It may be that England might advantageously be split up into provinces. I feel confident that such Provincial Assemblies might do great good, and that very ample room would still be left for an Imperial Parliament.

Not only might many social reforms receive in local assemblies that attention and elaboration which they cannot have in a great Parliament of the nation, but also I think that there would be very great advantage in the variety of local experiments which might be tried in different parts of the country and under various conditions. One province would profit by the experience, the successes, and the failures of another; a healthy competition would be excited, and out of various trials progress real and substantial might be achieved. The difficulties in our way are so great that they will never be overcome without the concurrent efforts of many minds and as the issue of many trials. Such efforts and such trials might, I think, be obtained under a sort of federal and provincial system of government. I do not think that they will be adequately obtained under the present system.

I have alluded to what seems to me the need of reform of the commercial law as regards the responsibilities of directors and agents and all those who are entrusted with other people's money. In my view the English system in all things gives too much liberty to the individual, even to defrauding his neighbour, and too little protection to the community. It is surely a very unwholesome sign that all the great commercial frauds of recent years have gone unpunished, be it from the defect of the law, be it from the want of an efficient public prosecution. Even I fear that the great and rich swindler often carries with him too much public sympathy. The poor man who steals or cheats to the value of sixpence is sent to prison without sympathy and without mercy. Even the small debtor may still, I believe, be sent to prison. But the great financier who has defrauded thousands of necessitous people of millions is never convicted—he cannot be imprisoned for debt; he is speedily and effectually whitewashed, and begins a fresh career. I cannot think that associated undertakings can have a fair

field till the law is strong enough to secure honesty in their management. In this as in some other things we must see that our system does not favour the rich.

In one respect most especially protection to the public seems to be very much required. I mean in respect of those institutions which are designed to facilitate the economies and savings of the people—insurance offices, friendly societies, and the like. The receipts are immediate, the benefits are deferred, and nowhere is there such scope for fraudulent or imprudent management. In truth, in nothing has there been such fraud or recklessness. We have had eminent Judges in several cases denouncing these frauds from the bench, but nothing has come of it—the perpetrators of the frauds have not been brought to justice. Constantly we see in the daily papers reports of most fraudulent cases which excite the indignation of the Lord Mayor and other right-minded magistrates before whom they come; but somehow or other whenever the thing looks ugly the matter is patched up and the accused go free. I do humbly submit that both more stringent laws and a better procedure for dealing with these cases are necessary.

One of the questions which has been specially submitted to you is, "What legislation should follow on the report of the Commission on Friendly Societies?" Of the details of that subject I am not qualified to say much, but on the general subject of insurance I will venture to express my opinion that, seeing the enormous importance to the community of the machinery by which providence is promoted and rendered effectual, and the peculiar difficulties and risks which attend institutions to secure deferred benefits, when left in private hands, the Government should take a part much more active and effectual than any Government has yet proposed to undertake. In truth, I incline to the view that much of the business of insurance should be undertaken by the State directly.

Local government and local taxation are subjects to which great attention has been paid by this Society, and my remarks on the necessity of decentralisation will show you that I for one attach to these subjects the most extreme importance. It has always been a main object of all my work in India to make a beginning among the natives of self-government by enabling them to do for themselves, by the aid of local institutions, many things which it is impossible that a great Government should do for them. And in this country also I believe that the genius of our people and the ancient character of our institutions point in the same direction. Of late no doubt much has been done in the way of new forms of self-govern-

ment, but I believe that there is still a want of system, a want of a proper demarcation of boundaries for local purposes, and a general want of method, which renders local government far from effective. We must consolidate our various forms of local government into one systematic whole.

Happily it cannot be said that as a people we now labour under an excessive taxation. A great reform has been wrought in that direction. But I may mention, as an ever-present subject of discussion in a society such as this—the incidence of taxation—how far it falls fairly on different classes, how far the great masses of accumulated wealth, which most stand in need of protection, fairly pay for that protection; how far the cost of wars and a magnificent external policy is laid on those whose influence and whose organs create wars so as to act as a deterrent from such courses. It is my impression that if every war were fairly paid for at the time by an increased income-tax, we should be sometimes much less inclined to adopt an unfriendly tone on very slight provocation.

And in my opinion perhaps the most important financial question of all in these days is, how far are nations or governments justified in throwing on posterity expenses incurred by themselves? Happily in this country we have not of late done much in this way, but the question is a very pressing one in India; and as lenders we in this country are enormously interested in the question whether all the bankrupt governments in the world can really charge their extravagances on their successors. Among the blessings of civilisation which we have communicated to Christians, Turks, Pagans, and infidels of all sorts, there is none which in these modern days they have so much appreciated as the system of State loans. To rotten governments nothing is more delightful. There is the double advantage that a loan both gives them an ample supply of money for their present necessities and also builds up a strong interest bound to keep them on their legs. In India to secure fidelity native states keep their soldiers three years in arrear of pay; and so, if the King of the Cannibal Islands can raise some twenty millions on the London Stock Exchange—he cares not on what terms—he feels pretty secure that he cannot be overthrown so long as the financial powers of London can keep him up. In truth, this country is largely responsible for the extravagances of the world; and the question arises whether this may not be carried too far, and whether we may not some day awake to grand repudiations by a generation which may with some show of reason say that they neither borrowed nor benefited by the money.

One or two more great subjects I shall barely mention.

Irish tenant right is now being carried out in practice, but the whole broad question of tenant right or compensation for improvements in England and Scotland is waiting for that practical discussion and solution for which it is beginning to press.

Then there is that very difficult but most important subject, the Game Laws, which many have attempted to deal with, but no one has yet in any degree disposed of. Assuredly a solution of this question must be found.

The whole subject of female industrial employment is yet an open one. I for one believe that nothing could be worse, either for women or for the community in general, than that women should play the part of men or obtain any sort of equality in the rights which have in all ages belonged to men. But there can be no sadder sight than to see women without adequate employment, and there are many branches of most useful industry which may, I think, be mainly given up to them.

Many other subjects might be mentioned, but I have said enough for the present.

I will only add that for this subject of economy and trade this great City of Glasgow where we are appears to offer greater opportunities for useful discussion than perhaps any other place in the kingdom. I will not offend the susceptibilities of our Southern and Western neighbours by calling it the Second City in the Empire—but this I may say, that while it is at least equal to any other, it far surpasses any other great city in the variety of its industries and its enterprises. There is scarcely an important branch of trade and commerce in which Glasgow does not participate; its citizens are shrewd and pushing to a degree which is nowhere surpassed, and in every quarter of the globe Glasgow men and Glasgow interests are largely represented. I feel that in such a place I very unworthily and ignorantly fill the chair of this very important section of this great association; but at least I may hope that in Glasgow my shortcomings do not endanger the success of our discussions, for I am confident that Glasgow men, as well as the strangers whom they so hospitably entertain, have done and will do ample justice to every subject which may be started; and I believe that Scotchmen will judge indulgently a brother Scotchman the best part of whose life has been spent in the earnest attempt to do his duty to the many millions of our fellow-subjects in a distant dependency.

Address

ON THE

REPRESSION OF CRIME.

BY

GEORGE WOODYATT HASTINGS, President of the Council of the Association, and Deputy-Chairman of the Quarter-Sessions of Worcestershire.

IT was the intention of the Association that the chair of the Section dealing with the Repression of Crime should have been filled by our old friend and fellow-member, Mr. Frederick Hill, who was so long known as Inspector of Prisons in Scotland. It is a matter of great regret to us all that the state of Mr. Hill's health compelled him, a short time since, to resign the post, and to abandon his intention of attending this Congress. Almost at the last moment I was asked by the Council to fill the vacancy which had thus arisen, and I did not feel justified in refusing to relieve them from an unforeseen difficulty.

In dealing with the question of crime, as with any other that comes before this Association, we have to consider, in the first place, the subject-matter of our investigation. A sound foundation of fact is the only safe basis for conclusions in any branch of social philosophy. Now, the criminals of this country—those, I mean, who come within the purview of our criminal law—are of two classes, the casual and the habitual criminals. With regard to the casual, some of them are the perpetrators of those brutal crimes for which we may be all agreed that exceptional treatment is necessary, and the others have committed offences like forgery, embezzlement, and fraud, which are not within the power, or at any rate are not usually practised by ordinary criminals. Confining myself, then, to the habitual criminals, or, in other words, to that predatory class who prey upon society, I cannot doubt that they are marked by certain aspects peculiar to themselves. I have been furnished with some curious statistics from the prison of my

own county of Worcester, which seem to show that habitual criminals are a race considerably below the average of Englishmen in point of physical capacity. In the five years from Michaelmas, 1870, to Michaelmas, 1874, 6,022 male prisoners passed through Worcester Prison. Of these, the average height was not more than 5 feet 4 inches, and the average weight was only 9st. 2lbs. Now, I make full allowance for the fact that some of these prisoners were juveniles, but we have to put against this that others did not belong to the class of habitual criminals, and may therefore have been, and in some instances undoubtedly were, adult males of exceptional size and weight. Taking them throughout, we can hardly doubt that the 6,000 male prisoners thus measured and weighed present an unusually low average of physical size and capacity.[1] These figures corroborate the impression I have formed from frequent visits to the prison, in which I have been painfully struck with the low and deteriorated aspect, both mental and physical, of the prisoners in the cells. I cannot doubt that they belong to a race, both in body and mind, below par; and it would seem that, like the inhabitants of some corners of the globe, they have been elbowed out in the struggle for life by those who have been stronger and better nurtured than themselves, and have been from generation to generation driven into crime as a means of subsistence. I remember that, many years ago, I was told by the author of 'London Labour and the London Poor' that he had found that the haunts of criminals in the metropolis were chiefly on the sites of the ancient sanctuaries, where, in truth, the criminal population had, from age to age, bred in and in, and perpetuated an

[1] Since delivering this address I have been furnished with accurate statistics as to the number of juvenile offenders (*i.e.* below sixteen years of age), comprised in the 6,022 male prisoners mentioned above. They are as nearly as possible five per cent. of the whole. I believe that, for the purpose of my calculation, this small percentage would be balanced, as I have said above, by the exceptional size and weight of some of the casual offenders. For instance, a farmer was detained in the prison this last summer for a few days on suspicion of crime, but was afterwards discharged by the magistrates. He had nevertheless been scaled and weighed, and is counted among the 6,022. He is a bulky man of some six feet in height. Similar cases are within my experience. But, even allowing something for the juveniles, the average height could hardly be brought up more than one inch, *i.e.* to five feet five inches. Now, my accomplished relative and friend, Dr. Beddoe of Clifton, who is probably the highest authority to be found on the subject, tells me that five feet seven inches may be taken as the average height of the adult Englishman. If this be so, it would appear that the habitual criminal class are two inches below the normal standard. I may add that the figures from prisons given in Dr. Beddoe's work correspond pretty closely with mine; but the numbers taken are not sufficient to afford trustworthy results. I am indebted to Mr. Roberts, the clerk of the Worcester Prison, for the figures and averages quoted above.

hereditary aptitude for vice. It would be well if statistics on this point could be collected from all the prisons of the country, and if we could be further informed as to the size of the heads and other physical peculiarities in the inmates of our gaols. An eminent French writer, Prosper Despines, has collected much interesting information on this topic, and his inquiries go to show a peculiar physical and intellectual depravity in the majority of criminals.

Now, given a class who are thus, by physical conformation and hereditary tendency, predetermined to prey upon the industrious portion of society, the question arises—By what means are we to meet and crush the evil? This is, in fact, the question which the Section for the Repression of Crime has set itself to answer. I reply that there is no one means by which the end can be accomplished. We have to repress, we have to punish, we have also to prevent. We must, in the first place, take care that we have a police efficient and vigilant, capable of watching over the criminal class, incorrupt in its administration, and intelligent for the performance of its difficult duties. In this island, with the exception of the greater part of the metropolitan district, we have adopted the plan of placing the administration of the police in the hands of local authorities. I believe that this principle is sound and salutary, and that we thus avoid the jealousy of the executive power which is so manifest in Continental countries. But it is a principle which we carry too far, and nothing can be more ridiculous than to see in some small boroughs a separate police force, consisting only of a sergeant and a constable. Such things are, in truth, the abuse of the principle of local government, and a clog on the prevention of crime. No police force ought to be kept in existence unless it be under the authority of an officer sufficiently well paid to command efficiency in every respect, and unless it consist of sufficient numbers to present a fair field for promotion among its various ranks. Given, an efficient police force for the detection of crime, we come next to the means of efficient prosecution. Lord Moncreiff, in his address as President of the Jurisprudence Department, did no more than justice to the spirit of the English law when he said that the absence of a public prosecutor in England was owing to the English respect for individual liberty, and the English determination to resist the encroachments of the Crown. This spirit has done good service in the past periods of our history; but we may well question whether the time has not arrived when we are paying too

dearly for ancient prejudice. I hesitate to place my own small experience by the side of that of many distinguished men who have expressed their opinions in favour of the appointment of a public prosecutor; but I may perhaps be permitted to say that during the time I have acted as Deputy-Chairman of Quarter-Sessions and Magistrate of my own county I have had many instances brought to my notice of the failure of justice for lack of such an official. There is often some misapprehension as to the particular point in our procedure at which this want is felt. It is said that the Bar of our criminal courts supplies all the ability and the learning that are needed for the prosecution of criminals. I fully admit that. No one has a higher opinion than I of the forensic qualities, of the high character and integrity which the English Bar, whether in civil or criminal cases, bring to the discharge of their duties; but I say that the defect in criminal procedure in England arises at a stage of the proceedings earlier than that at which the Bar are employed. There are many cases in which justice fails because there is no one to initiate proceedings against the criminal. Two or three years since, I brought to the notice of the Quarter Sessions of Worcestershire a remarkable instance of this kind, and the Court was so impressed by my observations that it determined to petition the House of Commons in favour of the appointment of public prosecutors. But it does not need exceptional and sensational cases to convince those who are practically engaged in the administration of criminal justice, that a public prosecutor is a necessity, if crime is to be adequately repressed. It is a remarkable fact that the most eminent men who have presided over criminal courts, for many years past, have arrived on independent grounds at this conclusion. Three successive Chief-Justices of England have pronounced in favour of a public prosecutor, and he would be a bold man who is ready to assert that Lord Denman, Lord Campbell, and Sir A. Cockburn are careless of the liberty of the subject, or ready to sanction any infringement on constitutional freedom. The last report of the Judicature Commission may give us fair hopes that this great improvement in our criminal procedure will soon be carried out. The results of that Commission have been of good augury for the amendment of English law. Years ago, the great reform known as the fusion of law and equity was advocated in the Law Amendment Society, but was viewed even by those of us who were most sanguine as something to be accomplished only in the far distant future. But on the

recommendation of the eminent men who have served on the Judicature Commission an Act has been passed for the establishment of a High Court of Justice, which will practically fuse law and equity, and give to all England the great benefit of a uniform procedure. This same Commission (to whom our Association presented a memorial on the subject) have now reported, after due consideration, in favour of the establishment of a system of public prosecution, and we cannot doubt that this recommendation will in a short time be carried out by Parliament. One of the benefits produced by the meetings of this Association has been the mutual interchange among the inhabitants of different parts of the kingdom of information as to their respective laws and customs; and those of us who have met in Glasgow on this occasion have had the advantage of hearing of the system of public prosecution which has been for generations at work in Scotland. Surely we may ask those who raise up in England a hundred phantoms of objection whether they have studied the system of criminal procedure north of the Tweed? Have public prosecutors in Scotland destroyed the liberty of the subject? Have they led to any persecution by the Crown? Have they been employed as the instrument of oppression and misrule? If they have not, and the history of a free and sagacious people speaks to the contrary, why should we suppose that the introduction of some such system into England will produce all the evils that have been foretold so often? It may well be admitted that there is some difficulty as to the particular way in which this great improvement ought to be carried out. The Judicature Commission have recommended the appointment of the clerks to the Justices as the public prosecutors in rural districts. I am not able to give my assent to this proposal, which I think might lead to inconvenience in many cases, and to abuse in some. Neither can I altogether concur in the proposal of the Lord Chief-Justice that the country should be mapped out into divisions under the care of Government officials, in whose hands the whole system of public prosecution should be placed. But I do not see why local authorities, such as Justices in Quarter Sessions and the Corporations of the larger towns, should not be empowered to appoint officers for the purpose of instituting prosecutions in those cases in which there would otherwise be a failure of justice. There is no question that many of the improvements in criminal procedure which we are all anxious to carry out hang in a great degree upon this question of a public prosecutor; and I know no subject on which the Association could more usefully exert its influence

for the purpose of obtaining an important amendment of the law.[1]

In regard to the conduct of criminal trials, there is little improvement to be made. It has long been the glory of this country that criminal proceedings are conducted with rare impartiality, and with a care for the interests of the accused which leaves little to be desired on the score of justice. Allow me, however, to enter a protest—perhaps unnecessary—against any proposal for tampering with the institution of jury trial. Nothing seems more surprising than that proposals should have been deliberately made to weaken this safeguard for innocence and freedom. I can but reiterate the opinion which I expressed the other day in the Jurisprudence Department, that, so far as criminal trials are concerned, the jury system, with few exceptions, works admirably. No institution that works well ought to be altered, for change is in itself an evil, and can only be justified by proved necessity. Let us trust we may never see the day when the verdict of fewer than twelve men shall be held sufficient to convict an Englishman of felony. But there is one respect in which I should be glad to see our criminal procedure altered. The able paper of Sheriff Dickson has brought before the Jurisprudence Department, in the most vivid way, the question whether a prisoner ought not to be allowed to give evidence in his own behalf. It is strangely imagined that those who are in favour of this improvement are advocates for the French system of the judicial examination, or, as it has well been put, the judicial torture of the prisoner. What is advocated, however, is, not that a defendant should be compellable, but only that he shall be competent, to give evidence on his own behalf. I was much struck, when listening to the discussion, with the advance which has been made in public opinion on this matter. When the Association met in Glasgow in 1860, a paper on this question was read by Mr.

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[1] The frauds perpetrated in connexion with public companies constitute in themselves a sufficient reason for the establishment of a public prosecutor. Two flagrant instances, the Deerham Colliery case and that of the Peat Coal and Charcoal Company, have occurred during the past year. In both of these cases criminal proceedings were instituted, and were subsequently withdrawn, after grave charges of fraud had been publicly made. Now, if the criminal procedure of this country is to be a matter of private litigation between the parties, it is of course competent for the prosecutor to withdraw from the suit; but if it is, as I venture to think, a question of public justice, then the interests of the public should be guarded by an independent official. I have been informed that, on the termination of the Deerham Colliery case, the Recorder of London, the Right Hon. Russell Gurney, said that the sooner a public prosecutor was appointed the better. See on this branch of the subject the address on Jurisprudence, by Mr. Joseph Brown, Q.C., in our Transactions of 1873.

Pitt Taylor, the eminent author on the law of evidence. He strongly advocated the admission of the evidence of the prisoner, but scarcely a voice was on that occasion raised in favour of the change. At this meeting the feeling was nearly unanimous in support of the proposal, and I believe it was so because the profession, and we may trust the public, have come to see how greatly such a change would operate in the interest of the innocent accused. Take, by way of example, the case of the two men, who, under the verdict of the coroner's inquest, will be indicted for manslaughter for their share in the late terrible railway collision between Thorpe and Norwich. The question of the guilt or innocence of these two men depends mainly on what passed between them on the night of the collision. No other person was present; they alone are able to speak of what took place. They each gave a different account at the coroner's inquest, but before the jury in an Assize Court their mouths will be closed. They must be indicted either together or separately; if together, neither will be able to give evidence, and the jury will be inevitably left in considerable darkness as to the real facts of the case; if they are indicted separately, it will be the interest of each to give evidence as strongly as possible against the other; while in each case the actual defendant will be left speechless, and, to a great extent, powerless against his accuser. Yet this is only a sample of what prevails to a lesser degree in a number of criminal cases. What can be more important to an innocent man than that he should be able to tell his own tale, to clear up dubious facts, and to account for words and actions on his part which, without such evidence, might tell painfully against him? I must confess that my own experience as a Chairman of Quarter Sessions, and perhaps still more strongly of Petty Sessions, has made me, in the interests of justice, a strong advocate for this alteration of the law. But I should be quite ready to proceed tentatively in the matter; and there would be nothing more easy than to enable defendants in all cases of summary jurisdiction before magistrates to give evidence in their own behalf, as they can now do in respect to offences under the Licensing Act—a provision which I can say, from my own knowledge, has worked not only without mischief but to the great advantage of all concerned in the administration of the law.

Equally important with the subject of procedure in criminal trials is that of the sentences to be passed upon convicted prisoners. Probably nothing has done more mischief than the habit of giving indiscriminately short sentences for repeated offences. So far as Courts of Assize and Quarter Sessions are

concerned, this has been in a great degree remedied of late years, and sentences are now usually given with reference to the past history of the prisoner. For myself, I am in favour of a short and sharp imprisonment for first offences, holding that there are a considerable number of casual offenders who will thus be deterred from the further commission of crime. But when once it has been established that a criminal has entered on thieving or any other offence as an occupation, means should be taken to protect society from his depredations by a lengthened term of imprisonment. The Prevention of Crime Act has provided that, after two convictions for felony, a prisoner, if sentenced to penal servitude, as in nearly all cases he ought to be, must be subjected to not less than a seven years' term of that punishment. This seems to be an error, for there are cases in which it is advisable to pass a sentence of penal servitude, and yet in which it is not necessary to sentence for so long a term. A conference of Visiting Justices, which was held in London in 1873, recommended that the law in this respect should be altered, and that a wider discretion as to the amount of the sentence should be allowed to Courts of Assize and Quarter Sessions. I only insist that in all cases of repeated offences the punishment should be cumulative in its nature; that, both for the sake of the public and of the criminal himself, he should be withdrawn from the possibility of crime for a considerable period when he has once manifested by his course of life the proof of a criminal habit. In truth, with regard to all sentences, we ought to be guided not so much by the actual crime as by the total circumstances of the criminal's career. It is not the business of human justice to mete out exact retribution for the offence; that is the province of a higher power. It is Omniscience alone which can measure the moral guilt of an offender, and Omnipotence alone which can apportion punishment equitably to the sin. Human justice is only concerned to see that law shall be deterrent and preventive. A distinguished Judge once said, when a prisoner complained to him of the hardship of being sentenced to death for stealing a horse, 'You are not to be hanged because you have stolen a horse, but in order that horses may not be stolen.' This is the true principle of criminal justice, which ought to stop short of no severity to prevent crime and to deter future offenders, but which should never inflict unnecessary pain, and should do no more than is adequate to serve the righteous ends it has in view. We have heard much, lately, of the prevalence of brutal outrages, and of the necessity for adopting more stringent measures for their prevention. It is much to be feared that

the sudden rise in the rate of wages has led the less instructed part of the working classes to give way in an unusual degree to sensual indulgence, which has been followed by personal violence and outrageous breaches of the law. We must not hesitate to adopt any measures which may be necessary to deter from crimes of this nature. Reluctant as I am to recommend any such measure, I must confess myself driven to the conclusion that the punishment of the lash, which has probably proved efficient in diminishing the crime of garotting, may be tried with advantage on the ruffians who have lately disgraced our civilisation. It is very possible that a few examples may be all that is required in this direction, and it is certain that public opinion points strongly towards an experiment of this nature. In such cases, and in such only, is the lash justifiable, since the protection of society is the one paramount object which the Legislature is bound to keep in view.

When I addressed you last year at Norwich I brought before you, at some length, the subject of prison discipline, and pointed out the want of uniformity of treatment in our county and borough jails, and the number of small and consequently useless prisons which are to be found in Great Britain. In accordance with the suggestion I then made, the Council of the Association this spring sent a deputation to the Home Secretary to ask for an inquiry into the subject. We were most favourably received by Mr. Secretary Cross, and there is every reason to believe that the Government will take some steps to remedy the evils which have more than once been pointed out. In Scotland the number of small prisons is peculiarly marked, and I would call the attention of all who are interested in the subject to the reports of the prison inspectors, which show that there are not a few jails in this part of the island in which the daily average of the prisoners is not more than one or one and a-half—an absurdity so glaring that one would think it only needs mention to ensure its immediate abatement. In another part of the United Kingdom (Ireland) we find the inspectors of county and borough prisons complaining in their reports, year after year, of the state of the jails, which in many cases are described as training schools in vice. They have repeatedly urged the Government to take steps for the remedy of such a discreditable state of things. It is scarcely credible, but it is a fact, that there are no Discharged Prisoners' Aid Societies in Ireland, and there has been no legislation, as in England, to encourage their formation. The only provision of the kind as to Ireland is contained in an Act of George IV., which enables justices to direct money to be paid to a prisoner

to enable him to travel to his home or to some place of honest employment. I should be glad if the Association would consent to address the Irish Secretary upon this subject, and thus bring about the establishment of an Irish society which would do the same good work that is now being done in England. I am, indeed, aware that the formation of additional prisoners' aid societies is urgently required in our own island, and Mr. Murray Browne has lately called attention to this subject in the columns of the *Times*.

I do not dwell upon the treatment of our prisoners, either in convict or other prisons, because I spoke on the subject at some length last year, and I pass on to our system of dealing with criminals after their discharge. This is a matter of great importance, and one respecting which those who have followed the course of legislation must begin to feel uneasy. I call your attention to it the more pointedly because the Association has for a long time past been active in the matter, and the enactments by Parliament have been in no small degree the result of your exertions. The statutory provisions on this subject are now contained in the Prevention of Crime Act, 1871. This Act, like the preceding one, the Habitual Criminals Act, was passed for the purpose of providing a special treatment for our habitual criminals, a course which the cessation of transportation had rendered imperative. By the 6th clause of the Act it was provided that a register should be kept of all persons convicted of crime in the United Kingdom—crime being defined, in the interpretation clause, as any felony, and some other offences, such as the uttering of false coin. It was also provided that the register should be kept in London by the Commissioner of Police, or such other person as the Secretary of State might appoint. From the 7th and other clauses of the Act it will be seen that special disabilities attach to habitual criminals; and if these persons, through want of knowledge of their habitation or other causes, are not made amenable to this statutory disability, the Act becomes a dead letter. It is, therefore, alarming to read the last report of the Commissioner of Police upon this subject. He says—'The registration of "habitual criminals" has been continued as heretofore, but the numbers on the registry have increased so rapidly that there are now 117,568 names on the register, and they increase at an average of 30,000 per annum. Very few inquiries have been received from any but the Metropolitan Police; and the identifications have been very few. Only 950 inquiries have been received from outside the Metropolitan district since the establishment of the register in 1869, and 3,006 from the

Metropolitan police. The number of identifications has only been 890 out of 3,957 inquiries; and as regards those made by the Metropolitan police, a large proportion could be identified without the registry at all.' It seems only possible to read these words as meaning that the register is unmanageable on account of the number upon it; that there is no real method of inquiry; that the system does not work, or rather that there is no system at all; and that the inference which is intended to be drawn is that the registration is of no use, and might as well be got rid of at once. This is a lamentable confession, and, coupled with the reports of the inspectors of police in counties and boroughs, complaining of evasions by persons placed under police supervision, is calculated to create serious alarm in the minds of the public. What seems to be imperatively demanded is that the register upon which the statute depends for its utility should be made at once thoroughly efficient. No moderate expense ought to be grudged for this end, for, crude and unsystematic as our procedure with regard to habitual criminals has as yet been, its power to check the depredations of the criminal classes has been fully demonstrated. Small indeed is the cost of police supervision as compared with the expenditure formerly lavished on transportation, and it will truly be a pity if a weapon of undoubted efficiency should be ruined either by a false economy or by inefficiency of administration. I cannot too strongly repeat what I have more than once said in my Section during the last few days—that police supervision, properly administered, is friendly to the criminal, as well as a protection to the public. It facilitates the employment of those persons who are anxious to earn an honest livelihood, and it is at the same time a guarantee that those who are discharged on license, and they whose sentences have expired, will not be permitted to resume their evil course with impunity. The suggestion which has been made that this system of supervision should be extended to smaller offenders convicted in petty sessions is one on which I am not prepared to offer any positive opinion. It may possibly become worth while to try the experiment; but at the present moment it may be better to ensure a more perfect administration of the existing law than to burden the police force with a rapid extension of its provisions.

We have been dealing hitherto with the means adapted especially to the repression of crime, but it is our duty also to look to the more blessed means of preventing it. Through the exertions of my friends, Miss Carpenter, Mr. Baker, and others, who have in no ordinary degree deserved the name of

philanthropists, a number of reformatory schools have been established in the country for the purpose of reclaiming youthful offenders. I know no movement which has been more purely productive of good. There has been literally no drawback to its success, and its promoters, after overcoming all the prejudices and opposition which inevitably beset those who benefit their kind, may truly rejoice at the abundant harvest of good which they have reaped. Scarcely, if at all, less important have been the industrial schools, which have dealt with a still more juvenile class. It is satisfactory to know that during this last session an Act was passed removing the doubt which existed as to the power of the local authorities in counties and boroughs to borrow money for the purpose of establishing schools of either kind. This measure was obtained on the representation of the Quarter Sessions of my own county, and I gratefully acknowledge the promptitude with which the present Home Secretary met the requirements of the case. But salutary as all such institutions are, let us never forget that the great work of national education in elementary schools is, after all and above all, the true preventive of crime. Those who are wrangling over their creeds and their crotchets, while the children in whom they profess to be interested are perishing in the streets, are the real opponents of civilisation. Those who resolve by every means in their power to bring every child within the influence of a sound moral and physical training, do more to prevent crime than all the jails, all the police, and all the tribunals of our land. Miss Carpenter has brought before us a proposal, which I trust will not be permitted to fall to the ground, for establishing Day Industrial Feeding Schools for the reclamation of children too neglected by their parents, and too destitute in every sense to be dealt with in the ordinary elementary schools. Such a system was, as you know, established by Sheriff Watson in Aberdeen, and carried out with complete success, years ago, to the immense benefit of that city. We have heard from his lips that the moral instruction given to the pupils during the day often influenced for good the fathers and mothers in their homes at evening. Let us hope that such schools, wisely encouraged by the Legislature, may rise up in every town in our land, and may reclaim the parents while they save the children.

Sermon

ON

THE RELATION OF RELIGION TO SOCIAL SCIENCE.

Preached before the Association in Park Church, Glasgow.

By the Very Rev. Principal CAIRD, D.D.

ADD to your faith virtue, and to virtue knowledge. 2 Peter, ii. 5.

The knowledge here spoken of is not religious knowledge in the narrower sense of the phrase—knowledge, that is, of theological ideas and doctrines—but rather that practical knowledge which is needed to give to our religious convictions their due expression and application amidst the manifold exigencies of common life. In order to success in any art we need not merely the intuitions and impulses proper to it, but also the practical knowledge, the technical training and discipline, without which these intuitions would be ineffective and useless. The inspiration of genius is not independent of study and hard work. It is true, indeed, that the poet is born, not made—that no man can become a true artist merely by culture. Without the divine afflatus—the intuition or sense of beauty that comes as an inspiration on the gifted mind—a man may be a maker of verses, a second-rate painter, a musician laboriously grinding out pieces faultlessly correct, according to the technical rules of harmony; but the best achievements of such men will lack the indefinable element of originality, the interpenetrating spirit and life that captivates the soul in the works of the great masters in the realm of art. Yet, on the other hand, grant to a man this heaven-born instinct, endow him in highest measure with the æsthetic vision and faculty divine, it is not less true that he needs something more—something which patient study and labour and discipline only can give him—before he

can command or merit real success in his vocation. Not only must science come in to furnish technical knowledge, and many an hour of painful labour be spent in acquiring practical skill and dexterity in the use of the materials with which he has to work, but the great artist, above all men, is one who must be possessed of that knowledge of the world, that sympathetic acquaintance with nature, that large discernment of man and society and human life, which comes only of profound study and observation. A great poem is not the mere frothing up of fancy and feeling, combined with a copious flow of rhythmical speech. I could name poems into which are distilled the results of the most comprehensive observation and thought —which are the fruit and flower of a mind that has been nurtured by the philosophy, the science, the highest political and social ideas of its time. In short, what success in any great art demands is that to inward feeling and intuition, and the ardent creative impulse, there should be added a large measure of practical knowledge.

The same principle holds good in the higher sphere of the spiritual life. In the nobler art of goodness, our text seems to teach, we need, besides faith or religious insight and the ardour of virtuous impulse or the desire to do good, a third quality, without which we shall not be fully equipped for a Christian's work in the world—namely, *practical knowledge*. Fervent devotion, enthusiastic religious feeling, philanthropic ardour, a spirit glowing with love to God and man—these are noble things in themselves; and a man can scarcely possess them without proving in some measure a blessing to his fellow-men. But, to fulfil in largest measure the benign mission of a Christian in the world, he needs something more. To do good to men he must know men. To serve his time he must needs know his time. To take part in the great work of helping on the progress of society—the physical, intellectual, and social amelioration of mankind—he must acquire some acquaintance with its existing condition and relations, its wants and weaknesses, the sources of its corruptions and diseases, and the best means and appliances for alleviating or curing them. If he would not prove merely a religious voluptuary, or let his zeal evaporate and end in fine feelings and fervid aspirations, he must, if I may so express it, be not merely a man of strong faith and sincere piety, but in some measure an adept in social science. He must 'add to his faith virtue, and to virtue knowledge.'

On the topic thus suggested I shall now take leave to add a few further remarks. The subject of which, in the position

I occupy to-day, I am naturally led to treat is, the relation of social science to religion—the reciprocal bearing and influence of Christian thought and duty, and the special department of thought and action embraced by the operations of this Association. In what relation does scientific knowledge generally, and its application to the purposes and uses of life, stand to religion and morality? Are the two provinces entirely independent, or in any way so correlated as to keep pace with and gather fresh light and energy from each other? Has religion, on the one hand, any contribution to make, whether directly, by the ideas it discloses, or indirectly, by the new ardour and inspiration which it supplies, to the prosecution of secular knowledge? On the other hand, has science any ethical or spiritual function, so that the man of culture and intelligence is therefore likely to be a better and more religious man? With respect, in particular, to that wide and important field of knowledge with which here you are concerned—the science which deals with human society, the principles of its organization, and the laws and conditions of its healthy existence and development—is there any sense in which this science can be said to occupy common, or, at any rate, collateral, ground with religion and ethics? Of all social forces, take it at the very lowest point of view, there can be no doubt that religion constitutes one of the greatest—that religious ideas and motives are, of all others, those which have taken the deepest hold on the human spirit, and exerted the mightiest influence on the life and history of our race. Is the man who is profoundly versant in the ideas or imbued with the principles which constitute this greatest of social agencies therefore better qualified for the investigation and wise regulation of other social agencies? And, conversely, will a knowledge of the facts and principles of social science in any way help a man's religious life—tend to bring the spirit nearer to God, or enable him better to fulfil his Christian duties and obligations?

Now, it is possible to take such a view of the nature of religion and morality as to make them absolutely independent of this or any other department of science. We may so narrow the conception of man's spiritual life as that neither ignorance can hinder nor knowledge help it—so conceive of it, in other words, as that not only are fervent piety and exalted goodness possible to the most uncultured minds and in the least enlightened ages (which no one denies), but that they gain absolutely nothing as to their essence from the advancing lights of science and civilisation. Religion, according to this view, consists in the belief of a few simple truths or doctrines to which

nothing can ever be added, and in the opening of the heart to certain feelings and sentiments which may be experienced by the little child or the unlettered peasant in equal fervour and intensity with the most philosophic thinker or the master-mind that has grasped the whole circle of the sciences. To do justice, and love mercy, and to walk humbly with God—this is the whole directory of Christian duty, and all that modern thought and investigation have added to human knowledge will not enable us better to fulfil it. Nay, it may be questioned—some may be disposed to add—whether the unsophisticated Christian does not possess advantages, in respect to piety, over his more cultured neighbour. His piety may have in it an unquestioning faith, a freedom from doubt, a quiet simplicity and reality, the fine bloom of which increasing intellectual culture might mar, but could never improve. And in like manner his virtue and goodness may be characterised by an absence of that self-consciousness or intellectual pride which knowledge and mental accomplishments are but too apt to bring with them. Science, literature, art, worldly knowledge, and erudition—the jurist's, historian's, politician's lore—are, no doubt, fine things in their way, but they are things of the world; they are foreign to that high and holy region in which we are concerned with the soul, and its relation to God and divine things; they have nothing to do with those inner experiences which find their expression in prayer, in the exercises of the sanctuary, and the cultivation of holiness of life.

The line of thought thus indicated is one which it is perhaps not to be wondered at that many good and pious people should be disposed to take. But a little reflection will, I think, convince us that it proceeds on an altogether mistaken notion as to the province of religion and its relation to science and civilisation. We cannot draw any such hard and fast limits between religion and science as are here indicated, or narrow the domain of the former so as to make it altogether exclusive and independent of the latter. I think it may be shown that science or scientific knowledge in general does in many ways contribute to the religious and moral advancement of society; and, therefore, that the discussions and operations of a scientific association, and especially of an association for the promotion of social science, have not merely a speculative interest, or an interest for the politician and the social reformer, but also a profoundly religious and Christian interest. To keep our remarks within bounds, I shall ask you to-day to confine your attention to the ethical side of religion, and especially to that with which we are here naturally led more particularly to con-

cern ourselves—its social morality. It will not be difficult to show that religion, so far from being independent of knowledge, culture, the ever-advancing lights of science and civilisation, would, as a social agent, be comparatively feeble and ineffective without them; and that only by their aid can it, in the highest measure, fulfil its function as the regenerator of human society. It may, I think, be on good grounds maintained that the man of scientific culture, if not therefore a more religious man, is certainly qualified to fulfil more thoroughly the duties which religious principle prescribes; and, further, that society, as it grows in knowledge, and especially in the knowledge of its own constitution and laws, becomes a better organ of the spirit and power of religion.

For the accomplishment of any great social end, such as the physical or intellectual or moral improvement of mankind, two things are necessary—namely, the desire or disposition to achieve it, and the knowledge how to compass it. It is the function of religion to evoke and stimulate the former, to awaken and minister ever new impulse to the spirit of human sympathy and brotherhood; but, that achieved, in order to any wide or lasting results, it must call in the aid of intelligence, of science, of that knowledge of human nature and human society to which only the most careful study and observation can attain, and without which all the fervour of religious zeal will be comparatively useless—sometimes even dangerous and noxious. That Christianity can fulfil, and has in a wonderful manner fulfilled, the former function, I need scarcely pause here to show. No one can doubt that, regarded merely in the point of view of social ethics, Christianity has introduced into the world a new moral power, in comparison with which all other benignant social influences are feeble and insignificant. It has enkindled in the human breast a new sentiment, an 'enthusiasm of humanity,' as it has been called, of an altogether peculiar and unprecedented character—a love for and passionate devotion to the good of mankind, which has proved itself more profound, more intense, more potent to quell all selfish impulses, and to rouse those who are swayed by it to unparalleled efforts and sacrifices, than any other principle by which the spirit of man can be impelled. Nor is this feeling a mere unaccountable instinct or inspiration, but one which takes its rise from the new ideas of human nature and human destiny which Christianity reveals. For Christianity teaches us to see in every human being a spirit made in the image of God, and capable of rising into eternal affiance with Him. It leads us to look on all men in the light of that new ideal of humanity which

the life of Christ sets before us, of that love which He bore to them, and of that sacrifice which was not too great to be offered up for their redemption. By these and similar conceptions the life of man is lifted out of its poverty and meanness, and becomes invested with an infinite worth. The pettiness and triviality, the sordid vileness and degradation that but too often attach to it, become to the eye of Christian observation no longer its essence, but its accidents—no longer its inherent and irreversible characteristics, but the foul accretions that obscure its hidden glory. As we become penetrated by the spirit of our Christian faith, all selfish indifference is quelled, cynical contempt or supercilious disdain for any human being becomes impossible. On the least, the lowest, the vilest we learn to look with an interest, reflected from Christ's sympathy, as possessors of a nature that contains in it untold possibilities of greatness and blessedness. We cease to despair of the very worst. The spectacle of human ignorance, vice, and crime, of vast multitudes sunk in almost savage mental and moral degradation, awakens in us at once a new and profounder compassion, and a new hopefulness and energy, when we see in them beings possessed of the nature of Jesus Christ, and for whom He could live and die. Catching the fire of His divine self-devotion, the Christian philanthropist begins to feel for these, and such as these, an aspiration to which nothing is too great to be hoped for, and nothing too hard to be endured. Such, or something like this, is that impulse of social beneficence which Christianity has the power to awaken in all who submit themselves to its hallowing and ennobling influence. As we attempt to depict it, we feel, alas! how feebly it acts upon most of us —how little our languid sensibilities have caught of this divine spirit, how incommensurate our feeble philanthropy with the power of self-abnegating love and zeal for the good of mankind which lies latent in the religion of Jesus Christ.

But now, when all this has been said—conceding to the very utmost the power of Christianity as a new and commanding impulse of social beneficence—it must still be maintained that that impulse can never achieve the highest results without the aid which knowledge, science, disciplined intelligence give. It is a great thing to be inspired by the impulse of benevolence, but the impulse of benevolence, however ardent and eager, will of itself carry us but a little way in our efforts to ameliorate society. Christian zeal and love are the main thing for our own souls, but, beyond a very limited range of action, they are blind and helpless. He who would extirpate the evils that affect the complicated organism of society and develop its

highest capabilities of good, will soon meet with problems which the instinct of brotherly love is as powerless to solve as it is to solve problems in mathematics, or to perform surgical operations. It is, no doubt, true that all the learning and wisdom in the world will not make a man a Christian, and that science, philosophy and letters would be, as instruments of social regeneration, but poor substitutes for religion. It is, no doubt, true also, that a very weak or ignorant man may be a good and pious man, that the feeblest intelligence, the mind devoid of the faintest tincture of letters, or ignorant as a babe's of history, politics, the constitution of human society, and the conditions of its progress and development, may yet be full of faith and charity, and all manner of good instincts. But though the state of a man's own soul is the main thing for him, and, in the absence of opportunities of culture, he is not responsible for blunders and failures which only knowledge could have prevented, yet it is not the less true that all his piety and goodness of heart may leave him a very useless and incompetent member of society. If his sphere of life is a very lowly and uninfluential one, religious feeling, supported and guided by the moral traditions and usages that have infused themselves into modern society, and become a sort of artificial wisdom to all well-intentioned people, may keep him from going far wrong or doing much harm—may enable him even to perform creditably the ordinary duties of life. But even in the most unambitious life there ever and anon arise occasions when the uninstructed mind, however pious and conscientious, is at a loss to determine the right course to take, and where all the pious tendencies in the world will not supply the lack of disciplined judgment and practical wisdom. And if we pass beyond such a limited sphere of action—if we are called to give effect to our philanthropic feelings by devising or co-operating in plans and schemes of social amelioration, by systematic attempts to reform abuses and corruptions, or to originate new laws, arrangements, institutions, for the good of society—then are we in a region where most of all must religious intuition without science be at fault—where we are met by problems of the greatest difficulty and complexity, demanding for their solution wide and comprehensive knowledge, great faculty of induction and generalisation, and no little administrative skill and sagacity, and before which, destitute of such qualifications, the most ardent religious zeal and enthusiasm will stand baffled and bewildered. Nay, we go further, and say that just because it is one of the most potent and resistless principles of action, religious zeal, when uninformed and unguided by knowledge,

may prove, and has often proved, injurious and disastrous to society. Religious feeling, though it does not qualify a man to treat social problems, does not prevent him from dabbling in them; and even intentional malignity has sometimes done less harm to mankind than sincere and well-meaning but wrong-headed zeal. It has led men unthinkingly to gratify benevolent feelings at the cost of the real and permanent welfare of its objects, and to apply sentimental remedies to deep-seated social evils, which they were as vain to heal as a plaster to cure an organic disease. For lack of the wider thought which distinguishes between what is local and temporary and what is permanent and universal, good men have often done grievous injury by the misapplication of sacred authorities and precedents, have attempted to settle social and economical problems by quoting irrelevant texts and examples, or tried to perpetuate in a changed world the religious institutions or rude moralities of a bygone age. Popular religious feeling, again, has not seldom been roused by the importing of sacred names and formulas into discussions with which they had no real connection, and a violent outcry has been often raised against much-needed reforms, or in defence of abuses which have become accidentally associated with hallowed traditions. Mistaking sincerity for wisdom, and strength of conviction for force of reason, men of kindly nature have again and again been betrayed into acts of grossest cruelty or intolerance, or have presumed to judge of questions and interfere with measures for dealing with which they are ludicrously incompetent, or have lent themselves to swell the tide of ignorant but conscientious prejudice and obstructiveness, or have rushed into the projects and schemes of a foolish philanthropy, or have become the tools of charlatans and sophists whose ill-considered social nostrums a slight tincture of science would have sufficed to expose. In these and innumerable other ways zeal without knowledge has not unfrequently proved itself, not only inefficacious and unproductive, but a positive hindrance to the welfare and progress of society.

Let me now offer one or two particular illustrations of the foregoing remarks. The most obvious example of the need of knowledge for the direction and guidance of religious and moral intuitions is that which is derived from the exercise of our charitable feelings in the relief of poverty and want. The simple dictate of benevolent feeling is directly to supply the wants of the poor and destitute—to succour the needy, feed the hungry, clothe the naked, and give shelter to the homeless. But a very little consideration teaches us that we cannot in

any such rough and ready way exhaust our duty to the poor, and that before we can do so we must call in the aid of practical wisdom, of careful and disciplined observation and experiment. The conclusion has now fixed itself on the public mind, so as to be accepted by all but the most unreflecting, that random and unsystematic alms-giving is not only not a beneficent use of money, but a practice positively noxious and baneful to society. It tends, especially in such a state of society as ours, to foster idlness and imposture, to discourage industry and independence of spirit, to tempt men to meanness, cringing servility, and lying, and in general to create a mendicant, vagrant, vagabond class, who are continually hovering on the verge of crime, and very often passing beyond it. Nothing, therefore, can be more obvious than that our benevolent feelings must, in order to achieve the good results to which they point, check their instinctive promptings, and wait to see what intelligent observation and knowledge of the laws and relations of society determine as to the best and safest ways of helping the poor. And this opens up the whole question of pauperism, which, so far from being of easy solution, involves, for the labourer in the cause of social improvement, some of the most intricate and difficult problems with which students of human nature and human society can deal. In investigating these problems—in considering, for example, such questions as those which turn on the comparative expediency of out-door or in-door relief, on the subsidising of the able-bodied poor, on the propriety of encouraging emigration, on the organisation of public charities and interference of the State with charitable bequests, &c.—in bestowing patient thought on such subjects, social science is not merely acting as the agent and minister of religion, but is actually defining and determining the meaning of Christian duty, specifying the actions by which alone Christian beneficence can take concrete form and reality.

The foregoing is an illustration of the way in which the duties of Christian morality are rendered much more complex by the conditions of modern society, so as to demand the aids of thought and science for their satisfactory performance. I will mention only one other consideration pointing to the same conclusion. The work of the Christian philanthropist has, in modern times, been rendered at once a much more elaborate and a much more effective thing than formerly by the light which the study of our social relations has thrown on the interaction and reciprocal influence of material and moral laws. It is as much as ever the acknowledged duty of the Christian benefactor to care for the poor and suffering, and to

reform the vicious and criminal. But attention has now been drawn to the fact that very much of the destitution and vice that exists is due to causes that are preventible, or which new and improved social arrangements might at least do much to modify. There can be no question, for instance, that a very large proportion of the misery and disease, and also of the vice and sin, which darken the lives of multitudes amongst us is due to ignorance and neglect of the laws of health, or to arrangements which render the observation of these laws all but impossible. Instead, therefore, of merely waiting till disease, destitution, and vice arise, and doing what we can to alleviate or retrieve the evil, it becomes the much more elaborate, but also much more potent and efficacious, function of the Christian benefactor to investigate into the physical causes and conditions of life amongst the poorer classes—to inquire into their employments, their food, their house accommodation, and again into the ways in which these can be so improved as to eliminate or reduce the sources of disease and crime. It is a good and Christian thing to comfort sorrow and bring back sin and crime to better ways, but surely it is an incalculably better thing to prevent the sorrow and sin from ever arising. Curative measures are only rarely or partially successful. Preventive measures are of universal application and efficacy. What Christian philanthropy does by sympathy and help to the forlorn and fallen is but as the withdrawing of a few drops from the sum of human wretchedness, as compared with what it could achieve by systematic efforts to dry up the sources from which much of that wretchedness proceeds. Nor is this all Examination into the causes and conditions of social degradation and misery leads on the inquirer to deeper and more fundamental questions. He soon begins to perceive that the sources of these evils are deeper and more organic than merely sanitary and other outward conditions of human life—that much of the abject destitution at the lower end of the social scale is due to the same causes which produce the overflowing wealth and luxury at the higher end. The growing wealth and prosperity of our country are constantly increasing the demand for those things which only skilled labour can produce, and the application of science to the practical arts and industries is ever multiplying those inventions by which labour is economised, and machinery supersedes mere physical force. But whilst thus ingenuity, dexterity, the mental resource and trained skill of the expert are more and more in demand, the condition of those who have nothing to live by but physical force becomes gradually worse and worse; as the mere labour-

ing class becomes overstocked, it sinks lower and lower in the social scale; and then follow the natural consequences—destitution, pauperism, disease, demoralisation. Thus we have, as the terrible concomitant of modern civilisation, increasing comfort and prosperity in some classes, luxurious affluence in others, and at the same time the creation and growth of a class of social outcasts, of masses of human beings sunk to the lowest point at which existence is endurable, who have nothing to lose and nothing to hope for, and on whom neither prudential, nor moral, nor religious motives have any influence. This obviously is a social malady which no superficial treatment can meet, and to meet which a knowledge of religious doctrines and a feeling of brotherly love are altogether inadequate. All honour to those benevolent souls who do their best by charity and sympathy to abate or alleviate some of its worst symptoms. But here, beyond all others, is a case in which, if the evil is to be effectively dealt with, feeling must call in the aid of thought, and humane sentiment go hand in hand with political and social wisdom. The question is not merely, Can we do anything to socialise and elevate the pariah class? but it is the deeper one, Can anything be done to prevent its very existence? Is it possible, by a more searching diagnosis, to detect and counteract the hidden disease in the social organism to which this disordered product is due? Is there no conceivable readjustment of the mechanism of society, by which we can prevent the accumulation of noxious matter, of decayed and rotten refuse that gives birth to this low and hideous form of life? What the remedy is, what or whether any reorganisation of the fundamental relations of society—any deeper conception of the rights and duties of property, any modification of the conditions that affect the distribution of wealth or the relations of capital and labour—might arrest or prevent the existence and growth of social barbarism—this is a question which it is not for me to discuss. But, whatever the answer may be, it is obviously a question on which mere pious or benevolent feeling has no right to be heard until it allies itself with profound observation and study of social phenomena, with historical, economical, and political science. And yet, if even an approximate answer could be given, it would furnish Christian philanthropy with a means of fulfilling its benignant ends, with a capacity of doing good to mankind, greater, more potent, more comprehensive, than it has ever hitherto possessed.

I have thus attempted to answer the question with which I started, or at least to indicate the direction in which the answer lies. Religion, as a moral power, cannot achieve its

own ends save by calling in the aids of thought, of science, of systematic observation and reflection. Knowledge does not make a man good, but goodness without knowledge is but a feeble agent in human progress. Godless science may be a very poor thing; but, for any palpable influence on the world's welfare, ignorant piety is generally a poorer still.

I cannot conclude, however, without attempting to obviate the impression which I can well believe the foregoing view is likely to leave on many pious minds. Is not all this talk, it will be said, about social welfare and civilisation and the progress of society, foreign to the main and all-important end of religion—the salvation of the soul and its preparation for death and eternity? The world and the things of the world, what will they be to each of us when a few brief years have come and gone! Its wealth and prosperity, its politics, its science, its intellectual and social progress—these may be fine things in themselves, but we may surely leave them to the children of the world, and let religious men confine themselves to the infinitely more momentous business of saving souls and preparing them for the world beyond the grave. Is it not our duty to sit light to a passing world and all its concerns, and, by faith and prayer and attention to the concerns of the soul, to prepare to meet our God? Surely the best thing we can do for the poor and forlorn and vicious is to awaken them to the state of their souls, and by leading them to set their affections on things above—on another and better world—furnish them with the only true consolation under the privations and hardships of the present?

I answer that such a view of Christian life and duty seems to me, to say the least, one-sided and exaggerated. It is, I cannot but think, a superficial and unwholesome pietism which so conceives of the relation of the present to the future life. I do not hesitate to say that the first and paramount aim of religion is *not* to prepare for another world, but to make the best of this world; or, more correctly stated, to make this world better, wiser, and happier. It is to be good, and do the most good we can, *now* and *here*, and to help others to be and do the same. It is to seek with all our might the highest welfare of the world we live in, and the realisation of its ideal greatness, nobleness, and blessedness. It is true, indeed, that in one sense the things of the world are insignificant—its wealth, its greatness, its prosperity but an unsubstantial pageant, a vain and fleeting show, a vapour that endureth for a little and then vanisheth away. But this description is only applicable to it when we refuse to look beneath the surface, to

the eternal in the temporal, the invisible grandeur that penetrates and suffuses all its objects and relations. The ne and the eternal are ever near us. God is not waiting us elsewhere; we are not going to meet Him or get near m only at some far-off point of time or space. God is here, we will but discern Him—above, beneath, around us—in e living air and the blue sky, in earth and stream and sea, nd most of all in these minds and hearts of ours. The eternal world is not a future world beyond time and the grave. It embraces and absorbs time; its ineffable power and elevation realise themselves under the forms of temporal things; its light and glory are latent everywhere, ready to the eye that will but see them to leap out in flashes of ineffable radiance in the common earthly life of man. And so it is the office of Christian faith not to soar away beyond the horizon of time in search of God, but to pierce by the power of spiritual insight to that divine light and love that are always and everywhere around us; it is the great function of Christian effort not to prepare men for death and for certain celestial mansions in some unknown point of space, to be reached only when death shall set them free, but to work out the divine possibilities of excellence, the capacities of knowledge, goodness, happiness, that are present now and ready to be elicited in every human soul. Poor, indeed, would be our aim and worthless our success if we strove merely to make all men comfortable, healthy, full-fed, easy-minded, and supplied with all manner of earthly satisfactions. But if our aim be to awaken thought and aspiration in them, to raise them out of the slough of low desires and brutal enjoyments, to make their minds wise and thoughtful, their hearts pure and gentle, their lives sweet and serene with the tranquillity of goodness—if it be our high endeavour to call forth the possibilities of excellence which each individual spirit contains, and those grander possibilities of ideal social perfection which age after age have kindled the imagination and inspired the energies of the noblest of the sons of men—then, I say, we need not wait and work and hope for a distant and future heaven, for there are the materials of a heaven beside us here in this gross and common world, which at once we may begin to create.

Does anyone still press upon me the thought that for me and those who hear me the hour is coming fast when we shall bear no part in any device or work that is done beneath the sun? What avails this great hope and endeavour for a world in whose good or ill we shall soon have no place or part? Surely for us the supreme and awful interest must be trans-

ferred to that which lies beyond the mystery of death? I answer, It is, it cannot but be, to all thoughtful men, a matter of profoundest interest to prepare for the change that soon must come, and the new world into which death shall usher us. But, be that world what or where it may, what other better preparation can we make for it than in the noble task of making mankind wiser, holier, happier? What discipline for a human spirit better fitted to draw out and mature its loftiest affections and energies than to labour for the emancipation of the world from sin and sorrow, and the incoming of the reign of truth and righteousness in the hearts and lives of men? To live, not for self, but for others, to find our deepest joy not in the delights of sense or in personal ambition, or in the more dignified life of culture—nay, not even in seeking the future safety of our own souls, but in seeking the highest good of our brother men, of those who are dear to the Father in heaven as His children, and for whose redemption the Son of God lived and died—say, can a nobler school of virtue be found than this? Where shall thought find grander scope, or love and sympathy and compassion and self-sacrifice richer expansion, or high courage and dauntless devotion a nobler field for their display, than in the war with evil; or hope and faith a more entrancing aim than in the victory over sin and sorrow and death which, if Christianity be true, shall one day crown the strife of ages? Live for this, find your life's dearest work in this, and then—let death come when it will, and carry you where it may—you will not be found unprepared. The rending of the veil that discloses the secrets of the world unseen, the summons that calls you into regions and worlds unknown, need awaken in your breast no perturbation or dismay; for, go where you may, you will not, cannot go in God's universe to a region where love and truth and goodness have ceased to be, or the spirit that has learned to live for these shall find itself a stranger.

SELECT PAPERS,

NOTICES OF PAPERS,

DISCUSSIONS,

ETC., ETC.

JURISPRUDENCE

AND

AMENDMENT OF THE LAW.

INTERNATIONAL AND MUNICIPAL LAW SECTION.

INTERNATIONAL CODE OF LAW.*

THE following report of the proceedings of the 'Association for the formation of a Code of Law and Procedure for all Nations' was read by Mr. THOMAS WEBSTER, Q.C.:—

The Jurisprudence Department of the Social Science Association includes amongst its objects the Amendment and Codification of the Law of Nations. The subject of such codification has from time to time been brought before the Association, in the address of its president, Lord Brougham, and by various persons on other occasions.

At the Manchester Congress, in 1866, Mr. David Dudley Field suggested the appointment of a Committee to prepare a report on the outlines of an International Code with the view of having formed, after careful revision and amendment, a complete code, to be presented to different Governments in the hope of its receiving their sanction. A Committee was accordingly appointed consisting of jurists of different nations. The separation and distances of the members of the Committee from each other made it difficult for them to take note of each other's progress, or to interchange with advantage their respective contributions for revision previous to a general meeting; but the proposer of the Committee, Mr. David Dudley Field, submitted to the Congress of the Association, at Norwich, in 1873, 'Draft outlines of an International Code,' as his contribution to the general design. The outlines so submitted embraced not only

* See *Transactions*, 1873, p. 219.

a codification of existing rules constituting the Law of Nations, but contained suggestions of such modifications and improvements as the more matured civilisation of the present age requires.

In the course of 1873 two Associations were formed; the one, the 'Ghent Institute of International Law,' held its first meeting at Ghent; the other, the 'Association for the Reform and Codification of the Law of Nations,' held its first meeting at Brussels in the autumn of that year. The Institute of Ghent is limited to fifty members, men of eminence in special departments and well qualified to interpret the law; the Association assigns no limit to the number of its members; it consists of jurists, legislators, publicists, and of others taking an interest in the Law of Nations, public and private. The objects of the two Societies bear a relation to each somewhat similar to the relations of the Juridical and Law Amendment Societies, meeting in London.

The two Societies held conferences at Geneva in the autumn of the present year; the Institute of Ghent was occupied principally in discussing the three Rules of Washington; and the Association, in receiving and discussing papers bearing on Arbitration and on the Codification of the Law of Nations, with a view to the extinction of the conflict of laws.

The Association passed a resolution to the effect that the 'Draft outlines of an International Code,' already referred to, a translation of which, in Italian, was presented to the Conference, should be dealt with in sections, by being submitted to competent persons for examination, revision, and addition, with a view to the formation of a complete Code. The Council of this Association has passed at this Congress a resolution to the same effect. It may then be hoped that by the united action and co-operation of competent persons some progress may be made towards the great end in view. Let it ever be borne in mind that any successful effort in this direction is in the interest of peace, that the assimilation of law and procedure and the extinction of the conflict of laws is one step towards the realisation of the idea of the unity of mankind to which history and progress point: not a unity breaking down the limits and levelling the distinctions between the different nations of the earth, but a unity founded on, and, as it were, the result of, their natural varieties.

The foundation of such unity is the recognition of the absolute equality of nations and of persons, not in respect of position or physical or intellectual power, but in respect of

the recognition of those duties, claims, and rights on which civilisation is based. In illustration of the way in which it is proposed to proceed, it may be mentioned that at the Geneva Conference communications were read and discussions took place on the assimilation of Law and Procedure, and the extinction of the conflict of the Law of Nations in respect of property in intellectual labour and of contracts, bills of exchange, and other negotiable instruments, subjects having no nationality, but of world-wide interest. The claim of the author of a book or other product in literature, or the fine arts, a painting, a picture, or sculpture, is personal and individual, and should be recognised as property throughout the civilized world. The United Kingdom has set a noble example of giving this copyright throughout the whole of the British dominions to an alien without regard to nationality, provided there be first publication in some part of the United Kingdom.

It is hoped and believed that this example will not be lost on our brethren across the Atlantic, who were represented in great numbers at the Vienna Patent Congress, at the Brussels Conference in 1873, and at the recent Geneva Conference; some of whom are present here, and others of whom would have been present had the meeting of the Association been one week earlier. On the occasions referred to they one and all declared that they hoped the anomaly as regards copyright to alien authors would cease ere long, and they pledged themselves to use their influence towards such an end. Conventions and treaties resulting in international copyright have hitherto been founded on the principle of reciprocity; let this condition be extinguished from our legislation; let there be a generous recognition of the claims and rights of all in respect of matters not local, without regard to nationality.

The observations made with respect to intellectual labour apply to all those transactions which intercourse and commercial relations have forced on mankind. Railways, steamers, telegraphs, postal arrangements, and free trade are changing the conditions and relations of intercourse and enterprise throughout the whole world.

Let law and procedure be adapted to the inevitable necessity, to the indications afforded by such facts of progress towards the unity of mankind.

In other subjects, as money, weights, and measures, an approach may be made to uniformity by an assimilation of law.

Why should not an attempt be made to abolish the distinctions between the laws of different parts of the United

Kingdom? Why should the law as to commercial contracts be different in Glasgow and in London? Why should that most important of all, the marriage contract, present such a conflict of law and procedure? England has learnt something from Scotland in education and police, and may learn something in the much agitated question of a public prosecutor, and in other matters.

In conclusion, attention should be directed to the terms to be employed in the proposed Code. The expression 'Law of Nations' includes those rules, a system, in fact, having no legislature to enact its degrees, no judiciary to interpret its decisions, no executive to enforce its sanctions. Is it, then, a chimera, a fiction, a mere phrase? Most assuredly not. The universal assent of the civilised world attests its reality. The conscience in the individual has its counterpart in the nation; there is a conception of rights and duties between different nations as between subjects or citizens of the same nation or state. International law, in the proper sense of the term, assumes some assent, contract, or understanding between two nations, as in the case of copyright, extradition treaties, postal and telegraph arrangements. It is not unusually designated as public and private. The expression 'Private International Law' is productive of much confusion.

It is suggested that, in lieu of private International Law, the term 'Municipal Law of Nations' should be adopted. Such law is the subject of positive enactment or of the Common Law. Its assimilation is a practicable measure whereby the extinction of the *conflict of laws*, to adopt the language of that eminent judge of the United States, the late Mr. Justice Story, may step by step be accomplished.

The author of this report is responsible for the contents, but it has received the concurrence of Mr. D. Dudley Field, Sir Travers Twiss, Judge Peabody of the United States, Dr. Thompson of Berlin, and other members of the Geneva Conference; the three persons last named are present at this Congress.

DISCUSSION.

Judge PEABODY (New York) said perhaps it became him, as one of those who took part in the Convention at Geneva, to say what occurred to him bearing upon the question of attaining the end suggested by the report. No one would doubt the importance of this matter, which had for its purpose not merely the control of the most beneficial influences upon international rights generally, but upon the private rights of indi-

viduals in their intercourse with individuals of other nations, as well as the rights of individuals in their intercourse with nations, and no one would doubt the great scope and importance of those measures if they could be successfully carried out. During the last fifty years great progress had been made among nations in this direction. It had been said that wars had come to an end, that the spirit of the age was such that no great international war could hereafter be waged. Unhappily the gentlemen who gave utterance to these sentiments were premature in their remarks. Wars had existed, and would doubtless continue to exist. But if wars could be mitigated in their severities, diminished in their numbers by considerate action of this kind, he thought none having a reasonable amount of hope for the future would be found to deny or seriously to question that good effects might be brought about in this direction. We lived in an age when the gift of prophecy or foretelling future events came from a knowledge of the past, we were approaching that state in which wars would become less frequent, and that condition of society in which wars when waged would be less severe. But the question before the department seemed to be more particularly, Shall we take any action on this subject? This was certainly, as he read the constitution, one of the numerous and important subjects that came quite within the scope of the Association. He submitted it was peculiarly the duty of this body to take action in the direction indicated. Seven years ago a committee was appointed at one of the annual meetings to look into this subject, and to draft the outlines of a system of international law. That committee entered upon the duties assigned to it, and the volume now on the table was the product of its work. If the law proposed there was deemed expedient they should adopt it. He submitted that this Congress had much greater power, and possessed the products of the best minds on the subject to a larger extent, than any other, and it was peculiarly their province to act in this matter. He did not know that any other body had a right, without the consent of this Congress, to appropriate the substance of this report. He hoped they would adopt such a course of action as might be deemed advisable in all the circumstances.

Mr. Webster said that the committee's report recommended that the outline of a code should be submitted by the committee, and that a special committee should be appointed to consider the said code and suggest any amendments or additions that might be necessary, in terms of the Geneva Conference.

Judge Peabody expressed himself satisfied with this recommendation.

COURTS OF INTERNATIONAL ARBITRATION.*

How far may Courts of Arbitration be resorted to as a means of settling the disputes of nations?

SIR EDWARD CREASY said that the opponents of the general principle of settling international disputes by arbitration produce most effect on the public, when they impute to the supporters of that principle exaggerated theories, which it is easy to turn into ridicule. It is assumed that we consider every possible kind of difference between States to be a fit matter for reference to a conclave of gownsmen; and that we also insist on a great nation submitting to every decree, however degrading and ruinous, which may be issued by a tribunal of pedantic referees very learned in law, but deficient in common sense and knowledge of mankind. But, in truth, the ablest advocates of the arbitration system freely admit that there are cases to which it is inapplicable; and the best jurists pronounce that, even when arbitration has taken place, no nation is bound by an award, if that award is grossly absurd, unfair, and unreasonable. On the first of these points Mr. Dudley Field, in his discourse on the 'Plan of an International Code,' expressly stated that it was not his intention to assert that every claim, which one nation may set up injuriously to another nation, ought to be submitted to arbitration. Demands may be made on a nation affecting, and acts may be done to it which seriously affect its independence, its national existence; and no nation with a due sense of self-respect will permit such demands or acts to be treated as arguable matters. But Mr. Field adds that there can be no practical difficulty in determining what claims are of this exceptional character, and what cases of dispute fall within the common category of being fit matters for determination by rational inquiry and fair argument before a properly chosen tribunal.

With regard to the second point, that an international award is void if it grossly outrages reason and justice, I will refer to Vattel (Liv. 2, xviii. p. 329), and to the more recent authorities of Bluntschli ('Le Droit International Codifié, p. 279), Heffter ('Le Droit International de l'Europe,' p. 210) and Calvo ('Le Droit International théorique et pratique, vol. i. p. 796). The system, if carried out with common honesty and common good sense, would have a very extensive and bene

* See *Transactions*, 1872, p. 121; 1873, p. 225.

cial operation, even though full allowance were made for such easonable exceptions. But I must premise that, in order to acilitate and effectuate the arbitration system, publicists and statesmen must distinctly recognise, and should sincerely act up to, a maxim of International Jurisprudence which, though admitted by text-writers, has been too much neglected by politicians—I mean the maxim that it is the duty as well as the right of every State to join (if it can do so without grievous peril to itself) in repressing and redressing, by force, if necessary, all gross violations of International Law, though the injurious acts may not be directed immediately against themselves. This principle will be found in Grotius (Lib. XI. cxx. sec. 11, and Lib. II. cxiv. sec. 11). Grotius bases his opinion on the high authority (almost the highest possible authority in such cases) of Cicero in the Treatise 'De Officiis.' (Lib. I. 7, 'Qui non defendit, ac nec obsistit, *si potest*, injuriæ, tam est in vitio, quàm si parentes aut patriam, aut socios deserat.')

Grotius rightly understands the words '*si possit*' as implying a limitation that the third party is not bound to interpose if interposition would involve grievous peril to himself. Grotius also wisely limits this duty of interposition to cases of wrong-doing which grossly and enormously violate the law of nations (injurias quæ jus naturæ aut gentium immaniter violant). Slight offences against the Law of Nations may be left to the discretion of the directly injured party as to whether he will claim redress for them or condone them. If he think fit 'renunciare juri pro se nato,' he may be allowed to do so, and the indirect 'jus' of the Commonwealth of nations may be permitted to slumber for the sake of peace and quietness.

Vattel lays down the same doctrine very copiously and explicitly (*Preliminaires*, sec. 22, Liv. I. cxxiii. sec. 283, Liv. II. ci. sec. 4). Among modern writers who urge, it may be named Bluntschli ('Le Droit International Codifié,' p. 267), and Heffter ('Le Droit International de l'Europe,' p. 203). Both these publicists give lists of the cases in which third parties ought to take action against wrong. Some of the cases included in these lists are open to comment.

This principle may be practically enforced in the following manner. All schemes for general International Arbitration require that the chief civilised States of the Old World and the New shall bind themselves to adopt that system by solemn and public mutual convention.

This international compact should consist mainly of the following provisions:—

1. Each contracting State should bind itself *as a rule* to

submit all international differences to arbitration, and to abide by the result of such arbitration.

2. Each contracting State should covenant with the other contracting States, severally and jointly, that it will treat, to the best of its ability, as the common enemy of nations, any State which, except in cases where its national honour and existence are grossly and imminently assailed, begins war without arbitration, or which refuses to abide by the results of an arbitration, except in cases where the arbitration has been conducted with gross unfairness or incapacity, and the award would work enormous injustice.

As Mr. Dudley Field has observed, there would be no practical difficulty in determining what cases fell within these exceptions. He gives a good instance of the first class of exceptions, namely, of a claim made by one State against another so preposterous and so injurious as not to deserve to be treated as fit matter for argument. He says, 'Let us suppose that Spain wished to reassert her sovereignty over Holland, under the pretext that neither Philip II. nor any of his successors ever made any renunciation of that right. I would not desire that Holland should refer such a claim to the decision of an arbitration, or to any human tribunal whatever.' As to the second class, that of cases where a State ought not to abide by an award on account of its flagrant wrongfulness, Vattel gives a good imaginary instance. He says, 'Suppose that the arbitrator should order, by way of compensation for some offence, that the offending State should make itself the vassal-state of the State which had received offence. Will any man of sense say that the State against which such an award is made ought to submit to it?' He justly proceeds to observe that, if the injustice of an award is slight, it ought to be submitted to for the sake of general peace; and if the injustice is not flagrantly manifest, it ought to be endured as an evil which has been voluntarily incurred. For if it were necessary that the party, against whom the arbitrators decide, should be thoroughly satisfied of the justice of their award before he obeys it, arbitrations would be utterly useless.

According to the plan which I have suggested, it would not be left solely to the unsuccessful party himself to determine whether the amount of unfairness in an award was such as to release him from obedience to it. It will be for the collective good sense of the other States that have joined in the mutual international covenant to say whether they will or will not treat the case as one so grossly unfair as to be exceptional to the general rule. And it is to be remembered that the burden

of proof will lie on him who asserts the exceptionality of the case. The same remark will apply to cases where the question is whether a claim is of such a nature that the party, against whom it is made, may refuse to treat it as fit matter for reference.

It will be said that all this will cause much discussion and expenditure of time. I answer, 'So much the better.' Time will be given for angry blood to cool, for improper claims to be withdrawn or moderated, as well as for fair claims to be admitted without disparagement of national honour.

Such discussions can never do any harm: and if they prove effective in one case out of ten, in one case out of a hundred, the system which introduces them ought to be welcomed.

The paper concluded with an eloquent description of the horrors and miseries of war, and with the assertion that the highest duties of both jurists and diplomatists are to prevent the lives of men being sacrificed in war.

A paper on the same subject was also read by ROBERT BERRY, M.A., Professor of Law in the University of Glasgow. He commenced by admitting, as too obvious to require notice, the advantages of arbitration, though it did not offer great hope of its general adoption. The protocol agreed to by the Congress of Paris recommended that any States between which a serious difference might arise should, before appealing to arms, have recourse to the kind offices of friendly Powers; and this is clearly the means for settling international disputes wherever possible. There are three distinguishing characteristics necessary for such tribunals, namely: (1) That those who compose them shall have a knowledge of the law which they administer; (2) that there shall be on their part an absence of interest in the causes which they are called upon to decide—that they shall be, as it is termed, 'indifferent;' and (3) that they shall have power to enforce obedience to their decisions.

The voluntary nature of the submission can never be lost sight of in the consideration of the last qualification. In regard to the first, it is a well-known legal principle that no dispute can arise which the law does not provide for—wherever there is no statute or precedent, there exists in the breasts of the judges a law which must regulate their decisions. How far can this be said to apply to international law? There are certain well-defined rules of practice, but there is no international tribunal for ascertaining disputed questions, and powerful nations avoid even the former with impunity. But beyond the confines of these admitted rules there are many

questions as to which publicists disagree, as to which different nations disagree, and as to which the same nation makes different contentions at different times. The United States recently submitted to arbitration the question of the liability of Great Britain only upon *ex post facto* principles, which this country agreed to for the sake of a settlement, but under protest in future cases. The insufficiency of even those principles to prevent misunderstanding is unfortunately too notorious.

The subject of contraband of war is one generally supposed to have been well settled, yet Professor Bluntschli seems to advocate that a 'neutral cannot be asked to prevent the issue *in small quantities* of arms and munitions of war. *It is altogether different with wholesale export.*' Questions of this sort and questions relating to boundaries would probably be the best suited to arbitration.

As to the second qualification, viz.: that the tribunal should be 'indifferent.' This, at first sight, appears obvious, but the doctrines of publicists take a palpable colour from the interests of their own countries 'without' (as Mr. Hall says) 'any impeachment on their fairness;' and this renders it impossible to look in a tribunal of foreign lawyers or statesmen for that absolute evenness of judgment which we regard as indispensable in an ordinary court of justice; and this practical difficulty in obtaining a perfectly indifferent tribunal obviously affords a cogent reason against the submission to arbitration of the disputes of nations arising out of controverted questions of international law.

The ambition of statesmen, international jealousy, the passion of military glory, after all, far more frequently give rise to wars than disputes as to neutral or belligerent rights. So long as communities, like individuals, are deficient in morality the law of force is the *ultima ratio* to which mankind must appeal. To the advance of moral sentiment, mutual forbearance, and enlightened detestation of war, rather than to Courts of International Arbitration, Professor BERRY looks for a gradual diminution of those bloody contests with which the page of history is disfigured.

DISCUSSION.

Mr. H. N. MOZLEY (London), in reply to the question as to who was to enforce the decisions of arbiters, said we knew very well from the present temper of many military powers that they had the will, even though they had not the power, to set at naught any conceivable

rbitration which might be made antagonistic to their interests. We ıust have a deed of all the nations in the world to resist by force of ırms disobedience to arbitration in any particular case. He did not hink these cases would be nearly so common as many of the opponents of arbitration supposed, and there was a middle course, viz.: that of 'benevolent neutrality.' This was ridiculed very much when first mentioned. He saw no reason why this course should not be adopted. It would have a very considerable influence in checking wars, so that, if one nation made a wicked and wanton aggression upon another, the offending nation would have the whole forces of the civilised world turned against it. He thought that 'benevolent neutrality' might be a step in the right direction. Of course we could not expect arbitration to be introduced all of a sudden; it must be a gradual process. 'Benevolent neutrality,' if put into practice, could not fail to have a very considerable influence in checking wars, and would be a step in the way of bringing into operation such a system as Sir Edward Creasy had expressed himself in favour of. There were, no doubt, as had been said, certain questions in which nations could not be expected to arbitrate—such, for instance, as the dispute which had been the cause of the Franco-Prussian war. The question at issue in that case had been evidently raised by France with the view of provoking war. For what in effect had the demand made by France amounted to? It was simply a demand that at no future time would the King of Prussia allow any member of his family to accept the crown of Spain. If the King had submitted to any such proposal, his Majesty would have been very much wanting in his sense of dignity.

Sir Travers Twiss (London) said Professor Berry had stated three difficulties in the way of arbitration, namely: (1) want of a full knowledge of the law, (2) indifference as to the merits of the dispute between the parties, and (3) the absence of power to enforce obedience to the awards of the arbiters. If these were really practical difficulties, how did it come that nations were, almost every three months, referring very important and difficult questions to arbitration? If it was not to be expected that competent persons could be got to decide the questions which arose, how were these settled? At a meeting of the Institute of the Geneva Conference, the President read the treaty which had been drawn up for the purpose of settling the boundary question, which had been discussed over and over again, and which had always been a point bringing the Swiss and Italian nations into conflict. Since that meeting, this question, which had caused so much ill-blood between these two countries, and might at any moment have caused war, had been settled, and had turned out to be only a dispute about the ownership of 1,800 acres of land. At the very same meeting, the Japanese Ambassador at Rome, who was present, mentioned that the question between Japan and Formosa was likely to be referred to arbitration. That was a pure question of compensation for injuries done to Japanese subjects by the people of Formosa. Supposing those two great nations had gone to war, and the seas had been placed under the laws of war, what an amount of evil and injury would have been caused. No jurist advocated that all international disputes should be submitted to arbi-

tration. No nation could be expected to go to arbitration upon questions which touched its safety or independence. Every nation was bound to submit to arbitration all questions which might be settled thereby—questions of aggrandisement, which were continually occurring. He had advised in six, or eight, or ten cases, on questions which had perhaps been under discussion for twenty or thirty years. The sovereignty of an island which was in dispute between England and Portugal had caused the sacrifice of hundreds of lives in taking it. At last the King of Portugal referred the question to arbitration. England might, if she had chosen, have overpowered justice with the sword, and taken possession of the island, but she referred the question to arbitration, and it was decided against her. In the San Juan question, her Majesty's Government allowed a very peculiar issue to be raised, namely: What, according to the language of the treaty, was the interpretation of it? It might be said we ought not to have agreed to this. But that was quite another thing. When we went to arbitration upon these questions, we did so being satisfied that they were a thorn in the side of either one nation or the other, out of which war might at any time arise, and that it would not be worthy of either nation to go to war on the subject. It must not be supposed that those endeavouring to promote arbitration conceived it to be the panacea for all disputes. They must not be misled by the word 'court' which had been made use of. According to what he advocated, we would not require a power behind to enforce judgments, because nations would voluntarily go to arbitration, and the dictates of conscience, as well as the feeling of shame before men, would be the strongest incentive to abide by the results. On the other hand, if we once adopted a system of compulsory arbitration, the power which compelled the arbitration would also enforce it. The question was, to what extent questions between nations could be referred to arbitration and not settled by the sword. He did not despair of nations arriving at the conclusion that arbitration was a very reasonable mode, and one perfectly conformable to law, for the decision of every dispute which did not directly interest the safety of the nation; and though a claim of justice might be mistaken by the arbiters, it was still more to be feared that in war it would be overpowered by the sword.

Professor EDWARD CAIRD (Glasgow) said the question naturally arose, Who was to be judge of the exceptions which had been spoken of? The only judge, of course, must be public opinion—the opinion of the nations at war and of the other nations—and the question was how far that public opinion could make itself effective. It had been a great hindrance to war that Governments were now, for the most part, obliged to consult the feeling of their nations, and therefore we saw very often that a check was put upon Governments by public feeling when they would otherwise rush into war. It was also a great check upon war that there was a certain interest by different nations in each other, and that such interest was increasing. If everybody had as great a knowledge of the affairs of other nations, and as much interest in them, as many of the members of this Congress, public opinion would be a real power, far greater than it was at present. But,

even now it had a great influence, for nations, even the strongest, like Germany and France, were always anxious to put a careful defence of their proceedings before the world. That was the tribunal of the people; its decisions were asked; no doubt they were not always respected, but they were now respected more than previously, and would yet be respected to a much greater extent. A great number of small disputes were now submitted to arbitration. Arbitration, however, must be confessed, in spite of all that had been gained by it, to be an idea. Importance was not to be attached to the fact that we could not yet describe the kind of court to which all nations would submit. We might have some vague ideas of such a thing, but these ideas were gradually bringing about their own realisation, and would become more and more powerful every day. The greater the interest which nations took in the affairs of each other, the more certain would be the success of arbitration. Even though they had no special measures to press, a conference like the present was doing good, and helping to bring on the time when all nations would submit to arbitration by continually discussing and ventilating the subject and forming public opinion upon it.

Judge PEABODY said no nation having any self-respect could take up the position of refusing to submit to awards of arbiters after agreeing to arbitration. If the other nations of the world saw one nation acting the part of a brigand and refusing to be governed by law, she could not possibly maintain her position. There was a very considerable executive power in the system of arbitration: it was not moral, it was not physical. No nation would in these days act in defiance of the opinion of the other nations of the world. As to the indifference of the arbiters, he submitted there was no more difficulty in this regard in dealing with nations than in dealing with individuals. Almost every judge or jury to whom cases were submitted had some notion, one way or another, of the right of the parties, whereas, in dealing with international affairs, such a difficulty was less likely to occur. Arbitration between individuals had long been a favourite system of healing discord and settling difficulties. The argument against arbitration in respect of the indifference of arbiters had less force than that regarding the executive power. It had been said there was an indefiniteness in the laws of nations. All the better for that. He submitted that, notwithstanding all that had been said against arbitration, it was still left with power to do infinite good, prevent an incalculable amount of sacrifice of life from war, and work out a beneficent result such as we all honestly desired might be attained.

Mr. H. W. FREELAND said that he was not so sanguine as some of the preceding speakers with respect to the results of arbitration. There was, however, some comfort to be derived from the assurance that they were all agreed as to the extreme desirableness of attaining the object aimed at, namely, the prevention of wars, or, to use the words of his friend Mr. Webster, the establishment of the unity of mankind. With reference to the remark of Mr. Justice Peabody that no nation would in these days act in defiance of the opinion of the other nations of the world, he would direct his attention to a very glaring violation of an international obligation, entered into so recently as at the conclusion of

the war between Austria and Prussia. He referred to the non-execution by Prussia of the 5th article of the Treaty of Prague. The fulfilment of that article had been evaded in a manner which he did not hesitate to call cold-blooded and disgraceful to the civilisation of Prussia. He hoped that the power of public opinion would be so great as to compel the execution of that clause in the Treaty from a sense of shame on the part of the wrong-doer, and to prevent what might possibly prove the occasion of a war which it would be painful for civilised men to contemplate. Again, in such a question as that of regaining the provinces of Alsace and Lorraine, he was not so sanguine as to expect that France and Germany, who were arming to the teeth, would listen to any proposal which might be made for referring their differences to arbitration. Still that was no reason why they should not take action in the matter. Public opinion had put down duels between individuals in this country, and they must seek to educate the public opinion of Europe so that duels between civilised nations might be put down. It was not too imaginative a dream to believe that wars would ultimately be very much diminished in number, and also very materially robbed of their horrors.

Sir EDWARD CREASY (Ceylon) was not so sanguine as to suppose that either France or Prussia would submit to arbitration the question about which they were arming to the teeth—as to the territories of Alsace and Lorraine. The main question really was that asked by Judge Peabody, ought the Social Science Congress to take any action in this matter, and if so, in what way? He thought it desirable that the Association should take some action by the publication of such papers as had been read, and so bring public opinion to bear on the question. Public opinion had actually put down duels between individuals, and why should it not also put down duels between nations? He thought it was not a highly imaginative dream to say that wars might thus be very much diminished in number and very materially robbed of their horrors. He doubted whether Russia would ever have crossed the Pruth if Austria and Prussia had been bound to take part against any nation that went to war without arbitration. Had France and England been under an express covenant to act against any power which began hostilities without arbitration, he very much doubted if the war against Denmark would even have been begun. A similar remark applied to the Italian war. To take the last great war, would that war have been so likely to have commenced if Austria, Russia, and Great Britain had been bound to take an active part against the palpable aggressor and wrong-doer? The existence of such rules as those recommended by Mr. Dudley Field would have obviated all, or at least the greater number, of these great wars.

Lord MONCREIFF said he found in the valuable book before him, which was a kind of specimen international code prepared by Mr. Dudley Field, and a full and exhaustive work, there were two sections which seemed to him to contain the whole sum and gist of this discussion, namely: 'That every nation and party to this code binds itself to unite in forming a joint high commission and high tribunal of arbitration in the cases hereinbefore specified as appropriate for its action, to submit to the decision of the high tribunal of arbitration constituted,

and proceeding in conformity with Article 535;' and 'If any party hereto shall begin a war in violation of the provisions of this code for the preservation of peace, the other parties bind themselves to resist the offending nation by force.' It had been said by Judge Peabody that many sanguine people hoped they had seen the last war waged in Europe. He must say he never had that feeling; he did not think at the present day he could hope or expect, except by the influence of public opinion, to make wars impossible. He hoped to see them much less frequent, but did not expect to see them much less oppressive, less lamentable, or less accompanied by horrors. He feared, the longer nations went on preparing armaments, wars would be shorter, but they would be sharper. The difficulty was this, that the pretext for war was not the reason for it. It was very easy to submit a pretext to arbitration, but when the pretext was removed another would be found. The thing was to get at the real object of the war. To commence with the Crimean war, we knew what a miserable beginning it had—some dispute about the holy places in Palestine, if he recollected right. It was a question that might have been settled in half-an-hour by any reasonable man; but matters went on, and the Russians crossed the Pruth. Now, did anyone suppose that Russia would have submitted to arbitration the question of whether or not she was entitled to cross the Pruth? The real object was the invasion of Turkey, and the question for France and England was, could they suffer Russia to take possession of Turkey with safety to themselves? No arbitration could possibly have settled that. Then, again, with the war between France and Italy on the one hand and Austria on the other, where the question was the independence of Italy, he did not suppose Italy would have submitted that to arbitration, and neither would Austria. But it was not a question which five men sitting in a room could have determined for these nations. Then came the Danish war, which turned upon a narrow enough point, but there were ulterior objects which would have prevented the referring of it to arbitration. So with the war between Prussia and Austria, there were matters, not on the surface, which could not have been made the subject of arbitration; and as to the last war, we knew very well that, whatever the pretext might have been as between France and Prussia, it was not the real ground of the war. If we had been bound upon every one of those occasions to interfere by force of arms among the belligerent parties to compel them to submit to arbitration, it was quite clear that that might have led to war instead of preventing it, and therefore the conclusion he was inclined to come to on the whole matter was, that there were many questions between nations, troublesome and irritating, that might very fairly be subject to arbitration; and while it might be desirable to have some recognised and acknowledged court of arbitration to which such questions might be submitted if the parties were willing, he owned he did not see at present (with all the desire he had, and all the desire the speakers had evinced to avoid the horrors of war, which could not be exaggerated or indeed described in adequate language) that nations could, consistently with their own position, come under any such stringent obligation as was suggested in the terms to which he had alluded.

UNANIMITY OF JURIES.*

Should Unanimity be required in Juries? By WILLIAM FORSYTH, Q.C., LL.D., M.P.

ONE mode of arriving at a right conclusion on the question whether a particular institution ought to be retained is to ask whether, supposing it not to exist, it ought now for the first time to be introduced. Setting aside the presumption in favour of any law or custom from the mere fact that it has for a certain length of time continued, or rather giving due weight to this circumstance, it seems fair and reasonable to consider whether we should wish at the present time to enact the law or establish the custom.

Now, tried by this test, I think it is impossible to believe that unanimity of juries in civil cases would be deemed to be either wise or expedient. In the first place, it would be an exception to the universal rule that prevails in all other cases where questions are to be determined by the vote or opinions of a number of men; for there invariably either a bare majority or a majority having a certain proportion to the whole number decides the question at issue. It is so in the highest deliberative body in the kingdom: I mean the two Houses of Parliament. It is so in all our municipal and parochial institutions, and I may add that, by the Common Law of England, where a power is given generally to any public body to determine questions, that power may be executed by a majority of the body. (See the cases of Withnell *v.* Gartham, 6 T. R. 388, and King *v.* Whitaker, 9 B. & C. 648).

So with regard to all partnerships, in the absence of express stipulations to the contrary. It has been well said that 'In every well-regulated society the majority has always claimed and exercised the right to govern the whole society in the manner pointed out by the fundamental laws; and the minority are bound, whether they have assented or not, for the obvious reason that opposite wills cannot prevail at the same time in the same society on the same subject' (quoted in 'Bouvier's Law Dictionary,' article Majority). 'If,' says Bentham, 'the work of forming verdicts had been the work of calm reflection working by the light of experience in a comparatively mature and enlightened age, some number certain of affording a majority on one side, viz., an odd number, would in this, as on other

* See *Transactions*, 1867, pp. 218, 221, 284; 1871, p. 253; 1872, p. 53.

occasions, have been provided; and to the decision of that preponderating number would of course have been given the effect of the conjunct decision of the whole' ('Art of Packing as applied to Special Juries'). Hallam, the historian, calls the requirement of unanimity in juries 'that preposterous relic of barbarism,' and Professor Christian declares his opinion that 'the unanimity of twelve men, so repugnant to all experience of human conduct, passions, and understandings, could hardly in any age have been introduced into practice by a deliberate act of the Legislature' (note to 'Blackstone's Comm.' iii. 375).

Beyond all doubt, this requirement of unanimity is an exception to other rules, and, like all exceptions, must be explained and defended by special reasons. I will hereafter consider what these reasons are; but first let us see how it was that the rule came into existence, for this may throw considerable light upon the question whether it ought or ought not to be continued.

Without occupying the time of this meeting by going into proofs, I shall assume that it has been established beyond the possibility of doubt that originally jurymen were witnesses summoned to give conclusive evidence upon matters within their own knowledge. The number of such witnesses whose agreement would be deemed sufficient to establish a disputed fact is of course arbitrary, and might vary, as it has varied, in different countries and at different times. The civil law required two witnesses at least, and in some cases a greater number, to establish a fact in dispute; as, for instance, where a debt was secured by a written instrument five witnesses were necessary to prove payment. In all countries the policy of the law determines what it will accept as the minimum of proof.

In my 'History of Trial by Jury,' written some years ago, I have endeavoured to show how it came to pass that the number twelve was chosen by our ancestors as the number whose agreeing evidence was deemed to be conclusive of the matter in dispute. Twelve was the favourite number for constituting a court amongst the Scandinavian nations. The number of compurgators amongst the Anglo-Saxons was usually twelve, and this number prevailed equally in the Continent of Europe. 'Long habit had taught men to regard it as the proper amount of evidence to establish the credibility of a person accused of an offence; and it was natural that the same number should be required when the witnesses came forward not to speak to character, but facts.'[1]

[1] I may mention in passing that one proof amongst others that the *judicium parium* spoken of in Magna Charta was not trial by jury—as it is constantly as-

Assuming this to be a reasonable account of the origin of the rule of unanimity, we see at once that it in no degree justifies its continuance when the constitution and functions of the jury have become wholly different. So far from being witnesses, they are simply the triers of facts deposed to by witnesses, and they would be violating their oaths if they were to import into this case their own knowledge of facts not proved by the evidence.

The Commissioners appointed in 1830 to report upon the courts of common law say—'It is essential to the validity of a verdict that the jury should be unanimous, and regularly they are not allowed to be discharged (unless by consent of the parties) until such unanimous verdict has been returned. *It is difficult to defend the justice or wisdom of the latter principle.* It seems absurd that the rights of a party in questions of a doubtful and complicated nature should depend upon his being able to satisfy twelve persons that one particular state of facts is the true one. As it is notorious that upon such questions a body of men so numerous are often found to differ irreconcilably in their views, it is obvious that the necessity of returning in every case a verdict, and an unanimous one, before they separate, must frequently lead to improper compromise among the jurors of their respective opinions.

'There is reason also to apprehend that where any of them happen to be actuated by partial motives it must tend to produce a *corrupt* verdict. Indeed no one can have been much conversant with courts of justice without having frequently heard the remark (where the verdict has been very long in suspense) that one or other of the contending parties has a friend upon the jury.

'On the other hand, however, the necessity for the unanimity of the jury carries with it one most valuable advantage. In the event of any difference of opinion it secures a discussion. It is not possible to poll the jury at once, and so without further trouble or consideration to come to the conclusion. Any one dissentient person can compel the other eleven fully and calmly to reconsider their opinions.

'But there seems as good reason why, after a certain period of time sufficiently long for the purpose of reasonable and ample discussion, the jury (if still in disagreement) should not be excused from the necessity of giving a verdict, or why the present principle of keeping them together till unanimity be produced

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sumed to be—is that amongst the *pares* who constituted the Judges of the County and Baronial Courts the opinion of the majority prevailed, *vincat sententia plurimorum.* (Leg. Hen. 1. 5.)

by a sort of duress of imprisonment should be retained. *And the interests of justice seem manifestly to require a change of law upon this subject.* We propose, therefore, that the jury shall not be kept in deliberation longer than twelve hours, unless at the end of that period they unanimously concur to apply for further time, which in that case shall be granted; and that at the expiration of the twelve hours, or of such prolonged time for deliberation, if any nine of them concur in giving a verdict, such a verdict shall be entered on record, and shall entitle the party in whose favour it is given to judgment; and in failure of such concurrence the cause shall be made a remanet.'

This report was signed forty-four years ago by some of the most distinguished lawyers of the day; but so slow is the march of improvement in the law that the recommendation has never been carried into effect. And let it be observed that the lawyers proposed the change, and so far the profession is not answerable for the continuance of a mischief which, in the words of the report, is injurious to the interests of justice. Why should the stupidity or perverseness or knavery of a single juryman be allowed to invalidate and paralyze the verdict which eleven others are agreed to give? In Scotland, if the jury in a civil case do not agree within six hours after they have begun to consider their verdict, they are discharged by the court, unless they themselves apply for further time to deliberate. In France trial by jury is limited to criminal cases, but even there the verdict is determined by a majority, and the same rule applies in Germany. In fact, nowhere except in England and Ireland and in America, which in matters of legal procedure has almost servilely copied the example of England, is unanimity required in the verdicts of juries.

It is, I think, quite certain that in many cases the unanimity is only apparent, and is purchased at the sacrifice of truth. After a long investigation of complicated facts, many of them shrouded in obscurity, with opposite testimony on either side, where it is extremely difficult to say on which scale the balance ought to incline, how can it be expected that twelve men of average understanding will always or generally agree in the same conclusion? Is it so in the casual intercourse of life, where contradictory facts are discussed, and each man is called upon to express his real opinion? And there is this additional difficulty in the case of contested trials: that the jury have to listen to all the arguments which the practised ingenuity of rival advocates can urge on both sides of the question. The truth is that, as I have said in my 'History of Trial by Jury,' 'verdicts are often the result of the surrender or compromise of

individual opinions,' and men will often be persuaded to give way, although each remains unconvinced. On the other hand it is a serious evil that not seldom juries are unable to agree, and they are discharged without giving any verdict at all. The consequence is that great expense has been unnecessarily incurred, rights remain in abeyance, and the same judicial drama has to be played over again, with possibly the same result. To these considerations must be added that of the absurd rule which prevents jurymen while considering their verdict from being supplied with food, so that the stomach which can hold out the longest will often gain the victory, however weak the head of the juryman may be. But we must not forget that this submission to hunger, or even the surrender of individual opinion from a disinclination on the part of the minority to dissent from the majority, involves the violation of an oath; for each juryman is bound under the solemn sanction of an oath to decide according to his own honest and sincere conviction. He has sworn that he will well and truly try, and a true verdict give according to the evidence; so help him God! He cannot devolve the responsibility upon another by adopting without agreeing in the opinion of that other, and so long as he conscientiously thinks differently he is bound, whatever be the consequence, to adhere to his own opinion.

My own opinion clearly and unhesitatingly is, that in civil cases the verdict of a majority in a certain proportion to the whole number should be taken after a sufficient time has been allowed for due deliberation. I have stated this opinion in print, I have expressed it in Parliament, and I adhere to it now.

Let us, however, now consider the objections which are urged against the change, and see whether they are sound. And first I will notice the ingenious and plausible arguments of an American writer, Lysander Spooner, who in his 'Essay on Trial by Jury' has discussed the question. He says (and so far I agree with him) that there is no particle of truth in the notion that the majority have a *right* to rule or to exercise arbitrary power over the minority simply because the former are more numerous than the latter. But in all matters of legislation by a representative body, it is a case of necessity that the will of the majority should prevail, otherwise there would be anarchy. The remedy against this act of tyranny on the part of the majority is found in the requirement of unanimity in juries; for, says he, 'the trial by jury disavows the majority principle altogether . . . and it takes twelve men *by lot* from the whole body of mature men, and their unanimous concur

rence is held to be necessary to remove that reasonable doubt which, unremoved, would forbid the Government to lay its hand on its victim.' Mr. Spooner insists that, as laws are or may be enacted by a majority against the will of a dissenting minority, a safeguard is found against the tyranny of the majority in the fact that they can 'never exercise the ultimate power of compelling obedience to the laws by punishing for disobedience, or of executing the laws against the person or property of any man without first getting the consent of the people through a tribunal that may fairly be presumed to represent the whole, or substantially the whole, people.' He holds that the jury have a veto upon the enforcement of any and every law, and that if twelve men in a particular case give their consent to the enforcement of the law their consent shall stand for the consent of the whole people. His theory in fact is—as he takes elaborate pains to try and prove—that from the time of Magna Charta downwards legislation has no authority with the jury beyond what they choose to allow to it, and they are at liberty to disregard any laws which they consider unjust and unfair. It is certainly difficult to understand how such an argument can be seriously propounded, and that, too, by a writer who has obviously taken pains to make himself acquainted with the constitutional history of England. In the United States indeed there does exist a power outside of Congress which can determine whether a particular law ought or ought not to be obeyed; whether, in fact, it has or has not validity. This is the United States Supreme Court, which sits at Washington and which has the right to decide whether a law passed by Congress is at variance with the original charter, and if it is so at variance the court can declare it to be null and void. But even there it is a court composed of lawyers appointed by the President which decides the question, and no such question is submitted to a jury. And it is absolutely untrue to assert that any jury, either in England or America, has such functions as are here supposed. All that a jury has to do is to determine particular facts, such as whether a contract has been broken, or a title has been proved, or a crime has been committed. But with the policy of the law which has given validity to a particular contract or title, or has enacted that such or such an act shall be a crime, the jury has nothing whatever to do. And if a juryman were to refuse to give a verdict according to the evidence because he thought the law harsh or unjust or impolitic, he would be violating his duty and disregarding his oath. This is a conclusive answer to the argument of Mr. Spooner.

But it is urged by opponents of the proposed change that

it would tend to make juries precipitate in their verdicts, and lessen the necessity for cautious and mature deliberation; for as a majority would be likely to agree sooner than the whole body, whenever that majority was obtained the verdict would be taken. The answer is: that the commissioners in 1830 proposed, and I propose, that in no case where the jury are not unanimous shall the verdict be taken until a sufficient length of time has elapsed which shall ensure due deliberation. My own idea is that five hours are quite sufficient for this purpose; but that is a mere question of expediency and detail. In point of fact, even now juries in civil cases are very seldom locked up so long as five hours, but are discharged without giving any verdict at all, when after a much shorter period they have communicated to the judge that there is no likelihood of their agreeing.

Again, I have heard it stated in the House of Commons that civil trials sometimes, as in actions for defamation, involve questions of character, and that the fact of there being a dissentient minority would in such cases be unsatisfactory. But to this there are two answers. In the first place, it is in the option of the party libelled to proceed either civilly or criminally, and, as will immediately be seen, I do not propose to relax the rule of unanimity in criminal cases; but secondly, I should be willing to purchase a relaxation of the rule in all questions of contract and title to property at the price of retaining it in cases of libel or slander, although my own opinion is that even there the verdict of the majority should prevail.

There remains only now to be considered the question of criminal trials, and I hope I shall be pardoned for quoting what I have formerly written on this branch of the subject in my 'History of Trial by Jury,' for I have nothing to add to or alter in what is there stated:—'To allow a verdict of "guilty" to be pronounced by a majority implies that there is a minority dissentient; that a certain number of the jurors are not satisfied that the charge against the prisoner is proved, or perhaps are entirely satisfied that he is innocent. Now this is not likely to happen except in doubtful cases, for in them only can there exist a real difference of opinion. And how it must paralyze the arm of justice when from the very tribunal appointed by law to try the accused a voice is heard telling her that she ought not to strike! Considering the state of public feeling with respect to capital punishments, would it ever be possible in such a case to carry into execution the sentence of death? And yet to substitute a secondary punishment on the ground that the verdict was carried by only a majority would be to acknowledge

a lurking and uncomfortable suspicion that the verdict was wrong. It would be felt to be unsafe to let the law take its course, and therefore the miserable compromise would be attempted of inflicting the minor punishment, as though there could be any middle course open to the Executive in the case supposed. If satisfied that the verdict is right it ought to allow it to be followed by the allotted doom, except so far as *mercy* may interfere; but if doubt so far prevails as to induce a mitigation of the punishment *there ought to be no punishment at all.* The question of innocence or guilt as determined by the verdict of a jury does not admit of degree. We cannot therefore graduate the sentences according to the strength or weakness of the proof. The party is either guilty, and ought to be punished according to the nature of his offence, or not guilty, and ought to be set free. But if after a conviction by a majority only the prisoner were pardoned on that account, this would be to give effect to the verdict of the minority, contrary to every rule of principle and reason. . . . . Some weight ought also to be given to considerations of humanity. Many may plead that where there is a difference of opinion amongst the twelve as to the prisoner's guilt he ought to have as much benefit from the doubt which is thus proved to exist amongst the jury as he is entitled to have at the hands of each individual juryman who has a reasonable doubt, in which latter case the jury is always enjoined to acquit.'

Such is a summary of the reasons which induce me to think that the rule as to unanimity in the jury ought to be relaxed in civil and retained in criminal cases.

The question is one of great and practical importance, and the more it is discussed the more likely we shall be to arrive at a just conclusion.

On the Same. By Mr. Sheriff Clark.

TO the proper understanding and discussion of this question it seems to me necessary at the very outset to endeavour to arrive at correct notions of what English jury trial really is, for what purposes it is suitable, and what is the nature of the machinery by which its efficient working is sought to be secured. Jury trial may be defined to be that mode of procedure by which the common sense of twelve men of average intelligence, furnished with the assistance of trained lawyers, and aided and directed by the skill and experience of the Bench, is brought to bear upon evidence led in open court in order to determine

questions of fact arising in a depending cause. The characteristics of this mode of procedure are publicity, rapidity, and finality. It presumes that the matter shall be determined before the component parts of the complex machine are allowed to separate, that the matter shall be determined once for all, that there shall be no appeal nor room for appeal, and that the verdict when returned shall be the outcome of the combined wisdom of the whole jurors brought to bear on the evidence collected as in a focus by the combined efforts of the Bar and the Bench. Yet, whatever its merits, trial by jury is by no means the only mode of determining questions of fact, nor in numerous classes of cases is it the best. No enlightened defender of jury trial would in the present day dissent from this statement. Trial by a single judge or before a bench of judges; trial on evidence taken by examiners, and afterwards judged of by the court; trial by the aid of skilled assessors; trial by remit to experts charged with the duty of finding the facts, and other similar modes of procedure, are all available for the end in question. All of them have their special advantages and disadvantages. Some are better fitted for one class of cases; some for another. No system of jurisprudence could make much approach to perfection which adopted one to the exclusion of the others.

Now, the advantages of jury trial seem to be the following: Of all other systems it makes the broadest separation between the facts and the law, because it relegates them to two separate sets of officials—the jury ascertaining the one, the court the other. The advantages of this are too well known to require comment. Again, trial by jury is the most powerful antidote to that tendency almost inseparable from the Bench when dealing singly with questions of fact—to decide each case not so much on its own merits as on certain general principles, to make one case a precedent for another, from which it may differ in important elements—to make, in short, the facts yield to the law, instead of applying the law to the ascertained facts. Again, jury trial has the advantage of the charge in open court, in which, if any important fact is omitted or misstated, it may be at once corrected by the watchfulness of counsel on either side. The advantages of this piece of machinery are so great as not to be easily overrated. Furthermore, experience has amply shown that witnesses are less likely to prevaricate when before a jury than on examination before a single judge, because they cannot be sure that some of the jury may not be cognisant of the very facts to which they are speaking. Again, it has been observed that before a jury the whole procedure

takes a more healthy tone, and is more free of technicalities; because anything like holding back evidence or unduly protracting cross-examination, any attempts, in short, at finessing, are dangerous before men whose common sense is their guide. Jury trial, moreover, has, I need not remind you, often formed, in important political crises, the great safeguard of liberty in England. Nor has it done this merely by protecting innocent men against unjust persecutions, but by accustoming the great body of the people to take part in the administration of justice, and so qualifying them for the exercise of the political franchise and the functions of freemen under a constitutional government. Yet, on the other hand, it is very obvious that while jury trial is admirably fitted for such simple and everyday questions of fact as fall within the experience of ordinary men, and appeal simply to their common sense, it is quite inapplicable to questions of a scientific or technical nature. Such questions are best dealt with by experts, acting under the direction of the court. Of the like kind are questions involving minute inquiries extending over periods of time, and which, if solved at all, require the piecing together of details, laboriously sought out and submitted to an elaborate and careful analysis. It may also be doubted how far consistorial causes, involving the domestic relations and questions of *status*, are suited for trial by jury.

It would, therefore, seem that the proper jury questions are of the following kind, and that to such the functions of trial by jury should be limited:—1st, Crimes, whether political or private; 2nd, That class of cases in which the common law remedy resolves into an award of damages, *e.g.*, injuries to person, character, or property; 3rd, Cases of contract which the law allows to be proved *prout de jure;* 4th, Cases of easement or servitude which depend on use or custom, such as rights of way; 5th, Validity of deeds—was a man insane when he made his will? did he sign a deed when under *duresse* or undue influence?

Assuming, then, that jury trial is a mode of investigation proper to be retained in our forensic procedure, when limited to such questions as the above, and bearing in mind its peculiar genius and mode of operation, we are in a position to approach the consideration of the question for inquiry—ought unanimity to be required from the jury? Now, the first observation I would make on this subject is, that every mode of investigation —every tribunal which the wit of man has devised for the trial of issues of fact—whatever its intrinsic merits may be, necessarily labours under certain imperfections or risks of miscar-

riage, which it is impossible entirely to eliminate; but that these, when known, generally admit of being reduced to a minimum in practice by the aid of certain counter-checks, or the introduction of certain countervailing agencies. Thus, in mechanics the tendency to jerky and irregular motion is controlled by the fly-wheel. Now, the risks of miscarriage to which trial by jury is exposed may be enumerated as follows:—The jurors, or some of their number, may allow themselves to be biassed by prejudices acquired before the trial began. They may take a grudge against one side from the demeanour of the witnesses, or the mode in which the prosecution or defence is conducted. They may be led away by mere sentiment, and may unconsciously substitute feeling for evidence. They may be moved unduly by the address of the last or most eloquent advocate. And what is most dangerous of all, and is indeed the great cause of all the others—they may leap to a hasty conclusion, simply because they deem it unnecessary, or will not be at the pains, to anatomise and weigh the evidence. These are risks of miscarriage to which jury trial is specially exposed. They are by no means unknown to the other modes of determining issues of fact, which have also certain vices or imperfections of their own, from which jury trial is from its nature free. When issues are tried before a judge without a jury, whether the evidence is led *vivâ voce* or taken on commission, such risks are sought to be guarded against by an appeal on the facts either to the judge himself, or to a court or courts above. And such appeals usually take the form of a rehearing on the notes of evidence taken more or less *in extenso* at the trial. In the case of arbitrations the same end is sought to be attained by requiring the arbitrators to issue notes of their proposed findings, so that a rehearing may be obtained if thought necessary before the award becomes final. Recourse is also had to the umpire where the arbitrators disagree.

Now, how are the risks of miscarriage incident to jury trial to be provided against? In other words, what in that mode of trial corresponds to the checks used in the other modes of investigation just referred to? And here it must be noticed that the check or remedy by appeal, or rehearing on the evidence, is, from the very nature and genius of jury trial, necessarily excluded. You cannot recall the jury and ask them to reconsider their verdict. You cannot appeal the verdict to the court; such a procedure would be fatal to the institution, for it would, for certain, destroy the independence of jurors, and, besides, it would be an appeal from those who had heard the evidence to those who had not. You may, no doubt, in certain

cases of plain miscarriage, order a new trial before another jury. But such costly expedients are to be sedulously avoided, and are not contemplated as part of the regular working of the machine. The question, therefore, recurs—What in jury trial are the checks against miscarriage provided by the institution itself? Now, it seems to me the answer is partly the publicity of the procedure, partly the charge of the judge, in the course of which errors, oversights, and misconceptions are almost sure to be noticed and pointed out by one or other side of the Bar; but more especially the rule which requires the jury to return a unanimous verdict, and thereby compels them to study the evidence and weigh the arguments in detail, and thus to throw their combined intelligence and sagacity into the trial of the issue.

Let us now consider how this requirement works. If the case is a clear one—that is, when, as in the great majority of *nisi prius* cases, there is a plain preponderance of evidence on one side or the other, and if the charge is tolerably lucid, there is, as there should be, no difficulty in returning an unanimous verdict. If, again, as may happen, prejudice or bias is at work, or the jury have evinced a tendency to do their work in a slovenly manner, and to leap to a conclusion on imperfect *data* —a case which may happen—it is highly improbable that out of twelve men chosen from the ordinary run of persons available for the panel there shall not be a minority—though it may be a small one—who are above such influences, and are ready to point out to their fellows the errors into which they are about to fall. Such men will generally find little difficulty in carrying their point, assuming them to be in the right. For, unless we assume the majority to be hopelessly corrupt—an assumption rarely warranted by facts—errors of judgment due to unconscious bias or oblivion of evidence are easily rectified, if they can only be got to listen to argument. Again, it may be assumed that of the twelve jurors all have not the same habits of thought, the same sort of experience, the same kind of memory, the same aptitudes for investigation; and consequently that their united and combined attention will supply their individual defects; that points of the evidence, incidents in the trial, pieces of argument, which have escaped some may strike others. And this experience has shown to be the fact, and to form the main excellence and strength of trial by jury. But it is plain that, unless some means existed for compelling all the jurors to attend to the suggestions of each of their number, the advantages of this element might be entirely lost; for if a majority could decide, each might content himself by voting

for plaintiff or defendant according to his own private notions, in complete disregard of what the others, and perhaps the best informed of the lot, could say to the contrary.

The requirement of unanimity seems, therefore, the only *compulsitor* adequate to ensure that the issue will be fairly and fully tried. And here I would call special attention to a consideration often entirely overlooked. Where the verdict may be returned by a majority, and when, as a consequence, the jurors are induced to vote without being compelled to discuss, it may happen that the grounds upon which the votes of the largest majority, or even of the whole twelve—if by accident they are unanimous—have proceeded, may turn out to be different or mutually destructive. Some, for example, may have voted as they did because they had overlooked something which the others saw; some because they disbelieved a witness which the others could have convinced them was trustworthy; some because they misunderstood a direction from the Bench, or an argument from the Bar, on which the others could have set them right if they had only been made aware of the mistake, and so on. In this way the plaintiff or defendant might lose his case, or an innocent man might be condemned by the accident of the majority or the whole of the jury having arrived at a verdict by different paths, every one of which some of the jury could have shown to be erroneous if they had only heard them mentioned. In short, the essence, and, indeed, the safety of jury trial consists in the joint action of twelve minds brought into play by mutual inter-communion. It is thus one man supplies the defects of the other. Without this the verdict would not equal the decision of a single judge. With this it is superior to the judgment of the Bench, even when confirmed by successive appeals, for in itself it contains many appeals. Yet this joint action cannot be ensured without the *compulsitor* of unanimity.

But it is frequently said this unanimity by which you set so much store is often unanimity merely in appearance; for there are some questions in which no twelve men can be expected to take the same view if they abide by their oaths and follow their individual convictions. In other words, it is said cases must continually occur where unanimity is only obtained by forcing some of the jurors, and those, perhaps, the most conscientious, to yield to the obstinacy of their less acute but stronger-minded brethren. Now, it humbly appears to me that this, and much to the same effect so continually reiterated, is based on erroneous views of the kind of questions proper to a jury, and of the true character of the function they are required to discharge.

I have already stated that the questions proper for a jury inquiry are not, or ought not to be, of a metaphysical, scientific, or speculative nature. They are precisely of the same category as those thousand questions which practical men in every department of life are in the daily habit of resolving for themselves. Was there a contract between A and B of a particular kind, and did B violate the contract to A's prejudice? Did A slander B? Did A cause the death or injury of B through recklessness or dereliction of duty? Was A labouring under aberration of mind when he entered into a certain agreement or executed a certain deed? Did A, on a certain occasion, commit the crimes of murder, treason, arson, burglary, theft, &c.? It is not pretended that in some cases, though they are not nearly so numerous as is often assumed, there may not be a conflict of evidence. But it must be remembered that in all such cases the province of the jury is vastly simplified by the rule—well known to the public and always clearly enunciated by the Bench—that the plaintiff or prosecutor of the issue has the *onus* laid upon him of proving his case; and that when in a civil cause the evidence is *in equilibrio* the party *in petitorio* must lose; and in criminal causes, where a rational doubt exists, the benefit of that doubt must be given to the accused.

But, again, it is most necessary to bear in mind what the real function of the jury is, and what is the nature of the duty they have sworn to discharge. It is the more important to have this clearly before the mind, because most erroneous notions have been, and are still, entertained on this subject, forming in truth the stock arguments against the requirements of unanimity and even against jury trial itself. Now, the function and duty of the jury is that they shall *try* the issue laid before them. This appears from the very words of the oath—'To well and truly try the issue between the parties, and a true verdict give according to the evidence.' By *trying the issue* is meant that the jury shall act not as individuals but as a corporate body; that they shall not only consider the evidence but weigh the arguments of counsel, and take heed to the charge of the judge; that when enclosed they shall reason the matter one with another, shall duly weigh such suggestions or objections as may be presented, and shall do their utmost to arrive at such a conclusion that their verdict shall represent not necessarily the separate and individual opinions of each of the 12, but the combined wisdom and sagacity of the whole 12. In the course of this process—which is a somewhat complex one—it is neither intended, nor in accordance with the jury oath, that each man shall singly form his own

opinion, and pertinaciously stick to it, without regard to anything that the others may urge. The jurors are not witnesses in the cause deposing to facts; they are trying the issue, and are bound to give not their separate but their combined judgment thereon. They are bound, no doubt, to state and defend their individual views; but they are bound also to give weight to the opinions of their fellows, and to bear in mind that they are not infallible. When this process of joint and several reasoning has been honestly gone through, experience has shown that they will in general arrive at an unanimous verdict. In doing so it by no means follows that the verdict will be such as each of them would have arrived at if they had all been considering the evidence individually, any more than they would have done so if they been deprived of the aid of counsel and the Bench. But this does not prove that they have violated their oaths. On the contrary, it shows that they have fairly and honestly tried the issue, and have—as they were bound to do—given due weight to the opinions of their fellows. And here I cannot but remark that, rightly considered, there seems nothing more reasonable than the requirement of unanimity in verdicts. In criminal trials where the life or liberty of a man is at stake, and where his character, however light the punishment, may be irretrievably blasted by a conviction, surely there is nothing unreasonable in requiring that the prosecutor shall establish guilt to the satisfaction of 12 honest men of ordinary intelligence before a conviction can follow? Without this safeguard, where, as in England, there is no public prosecutor, and prosecutions often originate in corrupt motives, who would be safe? Nor, when rightly considered, is the case different in civil actions. In all such as go before a jury the plaintiff, if he prevail, will deprive the defendant of his property, of his money, or it may be of his character. Is it much to ask that before he be allowed to do this he shall bring such evidence as will satisfy 12 men chosen by lot that he is in the right? If he cannot do this his plea must surely be a very weak one. And this principle, indeed, lies at the very foundation of English jury trial. It prevailed while the jury were the witnesses, as was the case in the infancy of the institution, and it is traceable all down to the present times, and is now as much in force as ever.

If therefore the views and arguments I have submitted are sound, the following propositions appear to me to be made out:—1. That trial by jury is an institution, not of universal application, but one which, when applied within certain limits

and to certain purposes, is of admirable use, and ought to be retained. 2. That the requirement of an unanimous verdict is an indispensable element in the working of jury trial pure and simple. 3. That, when rightly understood, there is nothing irrational in the requirement. It will be noticed that I have qualified the proposition that unanimity is a necessary element in the working of jury trial by using the phrase—jury trial *pure and simple*. I have done this for a special purpose, which I must now proceed to explain. In Scotland we possess, I believe, a system of procedure in the detection and punishment of crime nearer perfection than any other in Europe. Yet in Scotland a bare majority of the jury suffices either to acquit or condemn. How then, I shall be asked, do I reconcile this fact with what I have just been stating? Now, the answer I make is, that the Scottish method of inquisition in criminal matters is not jury trial *pure and simple*, but a very elaborate and complex system of procedure, admirably calculated for the detection of guilt and the protection of innocence, but one in which the function of the jury holds only a subordinate place. That is to say, it is a system the proper working of which is aided by many other appliances than the efficiency of the jury. In England there is no public prosecutor. Any man may prosecute another, even to a capital sentence, if he can get the jury to find a true bill. From that moment he has the entire control of the prosecution. He may, if he is only possessed of wealth, employ the most able counsel and attorneys, and push the matter against the accused to the utmost. Nor is there any guarantee that the measure of his zeal is not the measure of his vengeance—stimulated by the consideration that, if he fail to obtain a conviction, an action of damages looms in the distance. In Scotland, though private prosecutions are competent, they are hedged round by so many checks, and are shown by experience to be so unnecessary, that they are practically unknown. A system of public prosecution is in active operation so perfect and searching that few cases of crime can occur without the machinery of the law being set in motion for their detection. A full and searching examination of the evidence is made. If there are probable grounds the suspected person is examined, and from the outset the whole proceedings are under the control of the most practised local officials and the highest legal intellect. From this it results that a man is seldom put on his trial where pregnant proofs do not exist, or where it is not for his own interest to have the benefit of an open acquittal. Throughout all the procedure the Crown officers have no possible interest in the result one

way or the other, unless at those rare eras in our history when political corruption may have prevailed. Nor does the matter end here. During the whole procedure at the trial the public prosecutor considers himself bound to attend to the interests of the accused as well as to those of the prosecution, and if at any moment from the time the jury are empannelled down to his moving for sentence after the jury have returned their verdict he sees good reason to change his views as to the guilt of the accused, he may and will stop the cause, and the accused is at once discharged. Every facility is, moreover, given to the accused in the conduct of his defence. If he is unable to procure legal assistance, counsel and attorney are assigned him long before his trial comes on, and he is also provided with a list of the jury from whom the panel is to be drawn, and the name of every witness that is to be called against him. He is also made aware of and may inspect all other kinds of evidence on which the prosecution relies. In these circumstances it is very obvious that the function of the jury as a safeguard against erroneous conviction is relegated to a very inferior place, and it is sufficient that a majority may either acquit or condemn. It should also be noticed that the jury are not 12 but 15 in number, and that consequently the lowest majority is eight.

From these considerations—often not known or thought of—it is plain that the taking of verdicts by majorities in criminal cases has nothing to do with the question of the propriety of requiring unanimity in civil causes, or with the necessity for it in those of a criminal kind, where, as in England, private prosecutions are the rule, and the jury are the only safeguard for the protection of an innocent prisoner. It is also of importance to observe that even in this country, ever since the Union, cases of treason must be tried by Oyer and Terminer, as in England, and the jury must give an unanimous verdict. But in another respect the law and practice of Scotland, if rightly apprehended, throws a very important and significant light on the English practice. When jury trial was reintroduced into Scotland in civil causes in 1815, the English rule of unanimity was enforced, and this continued to be the law down till 1853, when the experiment was made of taking verdicts by majorities of 9 out of the 12 after a certain period of enclosure. This change was made in deference to an opinion prevalent in influential quarters, that civil jury trial, which, for reasons to which I have not time to refer, had never been popular in North Britain, would find greater acceptance if unanimity was not required. The result

of the change is worth stating. If jury trial was unpopular before, its unpopularity became vastly increased after this change, until at the present time it has gone very much into abeyance, little more than a score of cases being set down for trial in a year, and of these a large number never coming off. Nor is Scotland singular in this respect. What is erroneously styled trial by jury has been introduced more or less into the States of the Continent, but without the safeguard of enforced unanimity. The results are well known to be far from satisfactory.

The conclusion, therefore, which I could draw from all this is that, while trial by jury pure and simple is in many cases, though by no means in all, an admirable mode of determining issues of fact, it will not work efficiently, but may become a cumbrous and dangerous adjunct to the tribunals if unanimity be not required. No nation is bound to adopt this peculiarly English institution. For some purposes it is plainly unsuited even in England; and in some countries it may not at all suit the genius of the people. But if it is to be adopted, it must be adopted in its entirety, and unanimity in returning the verdict appears to be an essential condition to its effective and safe working.

DISCUSSION.

The Right Hon. Sir JOSEPH NAPIER, Bart. (Dublin), said: His experience and observation had led him to see that very often great injustice was perpetrated by the exceptional requirement of unanimity in juries. It was said twelve men of average intelligence and common sense were chosen. He did not think that was always so. If he was quite sure of getting twelve such men he would take a very different view of the matter, but he had often found that one or two men stopped the course of justice, and frustrated its operation. He had always considered the value of a jury trial to be the combination of the judge and jury. The judge who heard the trial was the person most worthy, *primâ facie*, to be trusted. It was said that the verdict of the jury was conclusive. He could not see that, for there were cases in which a new trial could be asked for, if the verdict was considered to be against evidence. There was no magic in the number twelve or fifteen, and in civil cases, seeing that it had led to so much injustice, and that one or two jurymen had power, under the present system, to frustrate the course of justice, he could not come to any other conclusion than that it would be a wise and judicious measure to allow a majority of the jury of two-thirds or three-fourths to return a verdict, and, if the judge was satisfied with their conclusion, to allow it to take effect. In criminal cases he concurred in the opinion that verdicts of a majority should be allowed. He thought that the system of criminal prosecutions in Scotland was

an excellent system, and should be adopted as a pattern, so that there should be a uniform system of criminal procedure in the United Kingdom.

Hon. Judge PEABODY (New York) said twelve men independently exercising their own judgments did not usually come to a unanimous conclusion in anything like a majority of cases, unanimity of juries was a forced matter, and the result was not the independent fair judgment of twelve men, and probably not the fair and independent judgment of even a smaller number. Juries were very valuable, not for untying knots, but for cutting them, and that was really the essential and necessary office for juries. He was of opinion that it was extravagant to require twelve men to come to an agreement in the settlement of doubtful questions in civil cases. He would require something more than a bare majority of the jury; but where the plaintiff established his case, in the opinion of eight or nine jurymen out of twelve, he thought that the decision should be recorded in his favour. He had had occasion in capital cases to set aside the verdict of a jury on the strength of his own judgment as against evidence, where the determination of the Government and the prosecutor were like iron, and where it required almost as much courage to stand against their force and against public feeling as to stand against a battery of artillery. There was a great clamour in the country from which he came to the effect that the guilty went free by the ingenuity of counsel creating doubts in the minds of the jury, and the complaint was extremely just. It had been the history of great and sensational crimes in the United States for some years past that the criminal went free, and murderers had been acquitted on the ground of insanity in cases where, to men who properly understood the subject, there would appear no insanity.

Mr. CHARLES CLARK, Q.C. (London), said one objection to requiring the unanimity of juries was the impossibility of getting many men to agree upon one point. Before leaving London, a few days ago, he received, by authority, the opinions of five judges consulted upon a case decided 150 years ago, and out of the five three were unanimous as to one thing, four as to two, and the fifth differed from the rest. This showed the difficulty of securing unanimity, though of course in this case the circumstance being of mixed law and fact increased that difficulty. The origin of the number twelve was no doubt to be found in the desire of our ancestors to give due protection to accused individuals. And there was also good reason to believe that the institution of the jury system came from the demand to have a sufficient number of witnesses to establish what was required in a criminal case. Indeed, in the most ancient times of our law the jurors were almost as much witnesses as judges in matters of fact. It seemed to him that if we took the decision of a majority of the jury, that majority would thereby really constitute *the* jury, so that, if twelve men were put into the box and seven had the power to return a verdict, the seven were really the jury. And that brought us to this point, that we must have the unanimity of seven men or there could be no verdict. It was simply changing the rule of unanimity from one number to another. Of course the change was recommended by convenience. In the same

way, when it was said we required no more than seven, we applied to that number the principle of unanimity as a necessity, in the very same manner as unanimity was now a necessity with regard to twelve. We could not get out of these practical difficulties. He was sorry to say he agreed thoroughly with Sir Joseph Napier in the observation, that there were many instances in which justice had been entirely obstructed by one or two jurors. It was possible, however, that this obstruction had arisen, not from corruption or wickedness, but from the incapacity of individuals to discern the truth with relation either to evidence or to argument. Cases of miscarriage of justice might also arise from the incapacity or unwillingness of the judge properly to put the circumstances or the argument before the jurymen in such a manner as to make them thoroughly comprehend what was his appreciation of both. He had often heard jurymen, especially in the country, ask each other, 'What was the direction the judge meant to give?' When such was the case, we must make an allowance for jurymen being unable to come to a satisfactory conclusion. He thought the principle of requiring unanimity of twelve men was, at this day, a mistake. But he must say that originally it had not been so, nor did the institution of twelve jurymen as a tribunal, and the requirement of their unanimity, deserve the absurd epithet given to it by Hallam, viz., that it was a barbarism. Originally it was a necessity, it had ceased to be so by the change of circumstances; that change of circumstances would justify a change of practice, though it would not justify any writer in so describing its origin. He agreed in thinking that there might be a change, but no change should be made without grave consideration, especially of the practical difficulties that might attend its adoption.

Mr. Sheriff Cowan (Paisley) thought the returning of a verdict by the majority of the jury was calculated to bring out, far better than by absolute unanimity, the mind of the jury. By having a majority of two-thirds giving a verdict, a successful conclusion was arrived at in ascertaining the mind of the jury. If the twelve men consulted together, and pointed out to one another the various lights in which the case presented itself to them, the extraneous matter was gradually eliminated and the mind of the jury became ripe for giving a decision, so that, in obtaining the decision from eight out of the twelve, the wheat was separated from the chaff, the true conclusion was arrived at, and such a conclusion as was generally satisfactory to the public. By taking a verdict from the majority one did not necessarily infringe the secrecy of the jury-room because the public need not know who the majority were. He recommended to friends in England the system of taking a verdict from a majority. As regarded criminal trials, he wished to raise a protest against the observations of his friend, Sheriff Clark. He had always been accustomed—and he had heard nothing yet to lead him to alter his opinion—to consider jury trial in Scotland as a most invaluable institution, and the verdict of a jury is essential to the preservation of the liberty of the subject, and he entirely demurred to the observation that in Scotland the verdict of a jury was considered in any way of an inferior or subordinate character. He thought it would be a great improvement if the number of the jury

in criminal cases in Scotland were reduced to twelve, and if the verdict of a majority of eight were accepted there would still be a safeguard for the liberty of the subject. At the Glasgow Circuit Court especially it would be a great relief to the public of Glasgow and the neighbourhood if juries consisted of twelve instead of fifteen.

Mr. W. T. S. Daniel, Q.C., County Court Judge, said: Forming a judgment from experience and not from theory, it would be seen that the rule of unanimity in juries, however sound it might be in principle, produced unsatisfactory results in practice. He attributed a great deal of the evils of unanimity to the number of jurors being twelve, and had never yet heard why English juries consisted of twelve. Historians had failed to tell us why it was so, jurists had failed to tell us why it should be so, some said it was because there were twelve signs in the Zodiac, others because there were twelve months in the year, while others had been so irreverent as to say it was because there were twelve Apostles. He rather thought, by digging down to the unfathomable depths of unrecorded history, it would be found that the number was originally twenty-three, but, as there must be a majority, twelve was accepted as the majority. The present Lord Coleridge introduced a Bill for altering the jury system; he abandoned the twelve, proposed to reduce the number to seven, but to retain the principle of unanimity. From circumstances beyond the control of the Government, the measure did not pass. A similar measure was introduced last session by Mr. Lopes, Q.C., but accident prevented it passing. Twelve was departed from and seven adopted in that measure, and he believed, also, it was proposed to retain unanimity. It seemed to him that unanimity was in itself a mischievous principle, and, whether applied to the number twelve or any other, it should not be enforced. It might perhaps be a startling thing to say, but he believed the tendency of professional opinion, backed by a very strong public opinion, was in favour of dispensing with juries in the vast majority of civil cases. He believed the public mind was coming round to the conclusion, not to be arrived at without long and large experience, that judges were to be trusted. When judges sat in courts, under the eyes and the observation of all parties interested directly or indirectly, when there sat before them the representatives of the press ready to record all that took place, there was a pressure brought to bear—he was speaking from experience—upon the minds and consciences of the judges, which made them feel it their duty and their pleasure to bring to bear on the case every faculty they possessed, physical, intellectual, or moral. He was satisfied that the question of unanimity might be safely left for determination to the Legislature, because, whether the verdicts were of necessity to be unanimous or not, the question of the justice or injustice of the conviction would be so hemmed in by the securities, in the exercise of the prerogative of mercy and otherwise, that the innocent would be safe in the hands of the executive; so that, if there was any doubt of guilt in a case affecting life or liberty, the interests of the innocent would be amply protected.

Mr. Thomas Webster, Q.C. (London), said that in *quasi* criminal cases and criminal cases he would retain the rule of unanimity; but

in civil cases he thought that the rule of unanimity had given rise to monstrous injustice. In one case, where a verdict was unexpectedly given for the plaintiff, he was informed afterwards by one of the jurymen that eleven out of the twelve jurymen were in favour of the defendant, but that they gave in to the dissentient, thinking that the judge would be sure to set the matter right. Yet that verdict cost the defendant £16,000, because Lord Campbell refused to set aside the verdict because a very intelligent jury had given their decision on the facts for the plaintiff. He was of opinion that seven would be an adequate number for the jury, and that it would modify, if not altogether remove, many of the difficulties in the way of unanimity if, after a certain time had elapsed, the judge was empowered to call in the jury and record their opinion, with the numbers on each side, and then discharge the jury. He thought in England they might learn a great deal from their Scotch friends regarding such matters.

Mr. G. W. Hastings (London) wished to say emphatically—confining his remarks to criminal cases—that he was so entirely satisfied with the working of the jury system, and with the verdicts they returned according to his experience, that he should be sorry indeed if any alteration was made, so far as concerned England, in the composition of juries or mode of taking verdicts. He believed that by requiring unanimity they obtained an exhaustive discussion of the subject of the trial by the jury which would never be obtained in any other way, and out of from a hundred to a hundred and fifty cases which came under his cognisance during the year he did not believe there were three in which, as judge, he could quarrel with the verdicts which the juries returned.

Mr. Sheriff Clark, in replying on the discussion, said most of the objections he had heard urged against unanimity were little more than objections to jury trial as a whole. Many of these objections were most powerful, and so much did they weigh with him that he should be inclined to limit the area of jury trial to a very small space indeed. In proportion as the purity of the Bench was established there would be less and less need of resorting to the machinery of jury trial in civil courts. He quite agreed in the observation that in civil cases it would be desirable to have jury trial restricted to those of a *quasi* criminal kind. The best plan, he might say, for the trial of civil cases, would be that now coming more and more into operation over Scotland, and which, if carried out, would be an admirable system, viz., that of taking notes of the evidence by a skilled shorthand writer in presence of the judge who tried the case, either to the dictation of the judge or otherwise, as nearly as possible in the words used by the witness in giving evidence. Let the judge then, in the first instance, decide the case, and if his decision was not satisfactory to the parties, an appeal could be taken to a bench of three or four judges in the court above, before whom the evidence as taken by the shorthand writer could be sent. He was certain this system, if carried out in its integrity, would be of immense advantage, and this was one of the reasons why he thought jury trial in Scotland was falling into abeyance. Taking the verdict of a single judge, and making it final and beyond appeal, was,

according to his experience, not a good rule. In trifling small debt cases it might be a very good rule, because in these the public were willing to suffer a great deal for the sake of expedition and finality; but when we came to deal with more serious matters, particularly in cases which might be formed into precedents, there should always be an appeal. But if there was a shorthand writer (taking the evidence under the direction of the judge, and guarded by counsel on both sides), who would so photograph the evidence that it could be put before the court above in the event of an appeal, there would be the perfection of trial in all cases, and to this system the fewest possible objections could be urged.

EXCLUDED EVIDENCE.*

Should the testimony of any and what persons, at present excluded witnesses, be admissible as evidence in Courts of Law? By Mr. SHERIFF DICKSON.

I OBSERVE at the outset that the task of reading a paper on this question is an easy one compared with what it would have been thirty-five years ago, when the grounds for excluding witnesses were so numerous that exclusion may almost be said to have been the rule and admissibility the exception. The errors of that system were exposed by the boldest of law reformers, Jeremy Bentham, in a manner so exhaustive as to leave little more to be said on the subject. His great but cumbrous treatise, published at a time when all law reform was regarded in high quarters as revolutionary, and attacking with questionable severity 'Judge-made law,' was ineffectual in his own day. A later generation, including such men as Brougham, Romilly, and Denman, was not content with extolling the wisdom of the law, but weighed the reasons for its rules; and with them as pioneers, law reform has made fair progress, and in no branch more signally than in the law of evidence. A series of statutes, dealing with that important subject in our usual piecemeal, but gradual and safe fashion, has abolished all the old grounds of exclusion, except as to (1st) parties accused in criminal trials, (2nd) the husbands and wives of persons charged on criminal trials, (3rd) persons who do not believe in a Supreme Being, (4th) those excluded for certain reasons supposed to indicate strong prejudice for or against one of the parties in the particular cause, and (5th) outlaws. The last two grounds of exclusion are comparatively unimpor-

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* See *Transactions*, 1872, p. 109.

light comes, the more likely is the judgment to be just.
exceptions there must be in judicial investigations, for
cting the liberty of the subject and the privacy of domestic
preventing surprise and fraud, securing formal writings
challenge on trivial grounds, and some others. The
tion which we have to consider is, whether the evidence of
witnesses above noticed ought to be admitted under the
general principle, or excluded under any of the exceptions
referred to.

The rule both in England and in this country is that the
charged in a criminal prosecution cannot be a witness
for or against himself. From the point of view of know-
, and consequently of ability to give a true account of the
in issue, the accused is usually the best witness upon them.
that of motive to exculpate himself, he is usually the
se. One of the chief reasons for his being excluded, there-
is that the motive to falsehood is so strong that his evi-
would be more likely to lead the jury to a wrong than to
t verdict. I think this proceeds on an erroneous estimate,
of the risk of the jury being misled, and of the importance
ull and fair investigation. In most criminal cases, as in
ses of personal injury, theft, forgery, and other frauds,
are really two parties—he who suffered from the crime
he accused. At present, one of them, who in England pro-
s, and in Scotland has usually promoted, the prosecution,
only admissible, but is usually the chief witness, whereas
her is excluded. In perhaps the majority of charges of
and criminal assault the rule operates with grievous
ice; as the fact of the intercourse is often not disputed

applies had been given against one accused on a criminal charge. In that case one of the parties had been examined and the other excluded; but in the prosecution for perjury their positions are reversed. Or the case is quite possible of a civil suit, in which the grounds of action or defence involve a criminal charge, such as forgery, in which both the alleged forger and his accuser may be examined: the jury may find for the defence, holding the document to be forged. This may be followed by a prosecution of the one party for forgery, in which the other alone is admissible. The jury may find him not guilty; and the third scene may be enacted of a charge of perjury against the witness on the former criminal trial, in which he is excluded in his turn, and his indefatigable and exasperated adversary has the field to himself. This state of things would have occurred, if the 'Claimant' in the recent monstrous trial had been acquitted, and had prosecuted Lady Doughty for perjury. In the civil trial both of them gave evidence at full length. In the one criminal trial only the one, and in the other only the other, could have been examined at all. Yet the same facts would have been before the jury in all the three cases. Surely such a state of things outrages both justice and common sense, and is a serious blemish in the law of any civilised country.

It cannot be disputed that false charges, such as of rape, assault, forgery, and perjury, are sometimes made from the accuser knowing that the evidence of the accused is inadmissible. The direct evil, in risk of erroneous verdicts of guilty, is thus considerable. Indirectly, there is a considerable risk in the opposite direction, from juries distrusting the one-sided evidence adduced before them, and thinking (but erroneously) that, if both sides had been fairly heard, the charge would have been disproved. The unfairness of the system gives to prisoners' counsel scope for declamation, by which a jury, especially where unanimity is required, are apt to be misled. They accept as true statements made by the counsel, or by the prisoner on his examination before the magistrates, all of which they would have disregarded, if the accused had been examined before them.

But it is chiefly in cases of circumstantial evidence that the investigation is unsatisfactory, owing to the accused being inadmissible. In such cases the counsel on both sides, the judge and jury are groping among a multitude of facts, bearing indirectly and often remotely on the question in issue, while he who could tell all about it remains in an enforced silence. It is difficult to realise the feelings of agonised suspense in which one innocently accused of crime listens to the piecing together

of the circumstances adduced against him, the imputing of motives, the deducing of inferences, all erroneously, till, as the toils are wound closer and closer round him, escape seems impossible; while all the time he knows that, with a few words, which the jury must believe, he could explain everything, blowing away like cobwebs in the wind all the network that entangled him, and vindicating his innocence before the world.

Again, at present the evidence of an accused is not merely inadmissible for himself, but also for any of his co-accused. As the prosecutor may include any number in the indictment, it is in his power to prosecute those who ought to be witnesses. The effect of the rule is modified in this country by the presiding judge having discretion to separate the trials. But he may refuse to do so, from not considering it necessary for the ends of justice; or the occasion for the evidence may not have been anticipated when the trial began. In England, the practice is to have the verdict taken as to the intended witness, and then to examine him for his co-accused. But this is not always competent, and must sometimes cause inconvenience in the conduct of the trial. The evidence of one person on the trial of another ought to be admitted as matter of right in all cases.

It will also be observed that to exclude the evidence of the accused, because it is more likely to be false than true, is opposed to the great principle, as well of justice as of civil liberty, that a man is presumed to be innocent till he is proved to be guilty; for it assumes that, being guilty, he will swear that he is innocent, and ignores the idea that he may truthfully testify to the charge being false. The present law assumes that the motive to untruthfulness is irresistible. It draws no distinction between the greatest and the most trifling offences; and holds that, even where the punishment is nominal, and involves no degradation, the accused will tell falsehoods, however spotless his conduct, and however truthful his disposition may have been before. There is so great variety in the position, circumstances, and feelings of men, that what is a trifling issue to one is exaggerated into false importance in the mind of another, in whom the spirit of litigation, or the love of victory, or some other feeling is keen; while its greatness is as insufficient to lead some men to speak falsely, as its trivialness is to keep others to the truth. A vast number of civil cases involve the whole fortune and prospects for life, the civil status and character, of either party—yet in these he is a competent witness, while he may not give evidence on either side on a prosecution for a smoky chimney, or for a contravention of some fussy police regulation. It constantly happens, too, that the

issue in civil causes involves penal consequences; yet in them the party gives his evidence under the double motive to gain his cause and to shelter himself from the criminal prosecution; whereas he cannot be examined in the subsequent criminal proceeding, although the motive to falsehood may be weaker. Certainly the opposite rules of admissibility in civil and exclusion in criminal cases cannot be maintained on the ground that a 'hard and fast line' separates them in regard to motive of the parties to falsehood.

The present law is sometimes maintained on the ground that the accused may be led falsely to acknowledge criminality, in order to shield some dear friend who is the real criminal. No doubt, instances of such heroic self-sacrifice are to be found in romances and in romantic history; but surely they are too improbable as actual facts to be of moment on the present question. The risk of them does not prevent the plea of guilty from being daily received as conclusive evidence of guilt. It ought not to prevent the evidence of one who, *ex hypothesi*, is falsely accused, from being admitted—against himself, it may be—but infinitely more likely in his own favour.

Those who maintain the present system, however, must hold not only that falsehood in such evidence is more probable than truth, but also that it will probably mislead the jury, and that these probabilities are so strong as to outweigh all considerations on the opposite side; for, as I shall notice immediately, there is almost no other reason, and really none of weight, for the exclusion. This also I conceive to be erroneous. If a tribunal is fit to judge of the truthfulness of witnesses whose connection with the case is casual, of whose disposition, character, and motives little or nothing is known—if it is fit to decide in civil cases between the contradictory statements of the parties, each backed by his partisans and friends—if it is fit to weigh conflicting evidence, and to draw inferences from circumstances often most involved—it is surely not unfit to judge whether the statement of one accused of crime may be believed, regard being had to his previous character—on which they are frequently informed—to the nature of the charge, and to the other evidence in the cause. Even if it were otherwise, the risk is of error in believing the prisoner's statement of his innocence. It is a risk, great or small (I think it is small), almost always in favour of the accused; whereas the exclusion of his evidence involves risk—in my opinion considerable—of unjust verdicts of guilty, and at least as frequently of unjust acquittals. Unquestion-

bly, the risk of error either way is much greater under the present system than if the evidence of the accused were admitted. Jeremy Bentham has truly said: 'The examination is the most powerful as well as the safest of all instruments that can be employed for the discovery of truth.'

But it may be said—the accused's statement, made on examination before the committing magistrate, is admitted at present. This, although better than none, is an unsatisfactory way of obtaining his evidence; for a written statement read by the clerk of court is not nearly so impressive as one made by the party himself *vivâ voce;* the finer shades of meaning are often lost in the record by way of narrative of what the accused said in answer to questions; the light thrown on his meaning and his credibility by his manner when examined is lost; and as the statement is made in anticipation of the trial, it often does not refer to important items of evidence adduced on either side. Moreover, in this country the accused may not put his declaration in evidence without consent of the prosecutor, which, if generally given, may be withheld, to the injury of the accused. It would be much fairer to him, whether innocent or guilty, and would enable the jury to appreciate far better the credibility of his statements, if he were examined before them.

The admission of the accused as a witness is sometimes objected to on the ground that it would induce perjury. It may be answered that those who are prepared to tell the truth should not be excluded in order to protect against their own misconduct those who would act otherwise. But the objection would be completely met by allowing the evidence of the accused to be taken without an oath. This I propose to do; because, if he intends to give false evidence, he will not be deterred to any appreciable extent by the oath, and because the jury can judge equally of his credibility, whether he is on oath or not.

The most frequent objection, however, is that it is moral torture to examine an accused party; that, if guilty, he may be entrapped by a skilful examination into admissions to his prejudice; that, if innocent, his desire to explain suspicious circumstances may lead him to make false statements which would seriously damage him; and that, while not guilty of the crime charged, he may have committed another which might be disclosed by his examination. These arguments ignore the interest which society has, not merely that the particular crime charged should be detected, but also that risk of miscarriage of justice should be excluded, in order that the fear of detec-

tion and punishment may deter from the pursuit of crime as a profitable and easy means of livelihood. Besides, in attempting to protect the guilty against the consequences of admitting their guilt, the law excludes the innocent from truthfully declaring and establishing their innocence. As to the risk of oppressive or entrapping examinations, a free press, open courts, and jury trial are ample for the prisoner's protection. To exclude the evidence of the accused now on that account is one of the anachronisms referred to in the address of our noble and learned president, for there is no longer danger from such a source. Any unfair examination would be checked by the presiding judge; and if it were not, it would secure the sympathies of the jury for the accused, and increase his chances of acquittal. Even in private prosecutions, as in England, the risk is almost visionary. In this country it is, I believe, entirely so. I admit the force of the argument to this extent, that the accused should be allowed to decline being examined at all, and to decline answering any questions that he chooses, leaving the jury to draw what inferences they think proper from his silence, with whatever explanation he gives of it. But it cannot surely be said that the risks of his committing himself by his answers, and of the jury drawing an erroneous inference from his silence, are sufficient reasons for the present practice.

In conclusion of this branch of the subject, I propose, 1st, that the accused should have right to lay before the jury the declaration he emitted before the examining magistrate; 2nd, that his examination before the jury as a witness either for the prosecution or defence should be competent; 3rd, that it should be conducted as the examination of other witnesses, except, 4th, that it should be on solemn affirmation, not on oath; 5th, that the accused should be allowed both to decline being examined at all and to decline answering any questions put to him; and 6th, that there should be appropriate penalties for false evidence given in the way thus noticed. I must add that the French system of the judge examining the accused is objectionable, as it turns him into the prosecutor, and, by engaging him in an intellectual fence with the accused, is apt to pique his *amour propre* into a love of victory, thus depriving the accused of the protection of a judge holding the scales of justice with calmness and impartiality. It is impossible to read the reports of some trials in France without feeling that such examinations are unfair.

II. The rule as to the husbands and wives of accused parties is that they are inadmissible on either side, except

where the charge is of a crime committed against themselves. It is founded on the double principle that truthful evidence cannot be expected from one so closely connected with the prisoner, and that the peace and happiness of domestic life, which society has great interest in preserving, would be imperilled by the examination. The exception is recognised to prevent the application of the rule from enabling one of the spouses to inflict without detection grievous injuries on the other in the privacy of their constant intercourse. If the rule is maintained, no doubt so must the exception, lest that which is intended for securing the happiness of man and wife should place it and even their lives in jeopardy. Yet it is hardly consistent that a class of witnesses should be excluded by a rule which assumes them to be prejudiced in favour of the accused, and should be admitted in exceptional cases, where prejudice against the accused may be expected. If the pair have been on bad terms before, such prejudice is probable, the mutual hatred of husband and wife who have quarrelled being often intense; whereas, if the offence occurred in a moment of passion or thoughtlessness, or if the parties have been reconciled, it is often quite forgiven before the trial. The evidence of a wife in this class of cases is therefore usually found to be strongly prejudiced either against or in favour of her husband. It ought not to be, and is not, excluded on that account; but the jury judge of its credibility with regard to the conflicting feelings by which such witnesses may be inspired, with regard to the demeanour of the witness, and after comparison with the other evidence. In cases where the evidence is now excluded they could do the same, although the task might sometimes be more difficult. Yet it is not so difficult as it is to draw the correct inference in complicated cases of conflicting and circumstantial evidence. Whatever the difficulty is, it is thought not to be a sufficient reason for withholding the evidence, but rather for special care in weighing it along with all the other evidence in the cause. That the husband or wife could often give important evidence is indisputable: for in proportion to the closeness of their companionship must be their knowledge of each other's actings. Sometimes they could supply the missing link in the proof on either side, or give the key to conduct otherwise inexplicable or erroneously explained. Or the fact to which they could speak may be so occult that no other evidence of it is obtainable; as in a charge of murder, where the defence is that the husband inflicted the fatal injuries on finding his wife and the deceased in the act of adultery. The prisoner's wife was

admitted in an old Scotch case of this kind. (Christie, 1731; Maclaurin's Cr. Reports.) It is thought there is less risk of injustice in admitting evidence of the accused's wife or husband in all cases, to be weighed along with the other evidence, than in excluding it by a general rule, but admitting it by exceptions in those cases where it can least admit of this most important test of accuracy and truthfulness.

But it cannot be disputed that domestic peace would be sometimes marred by husband or wife being examined for the prosecution, and that such examinations would often be cruel moral torture. I would, therefore, not allow them unless both of the married pair consented. The same argument does not apply to the examination of either spouse as a witness for the other. There, the risk is of falsehood in exculpation, by which domestic peace cannot be imperilled, except where the accused is malignant enough to take serious offence at the falsehood not having been sufficiently strong or well conducted to escape detection—a case not probably frequent. But why proceed on the footing that, if the evidence were competent, false evidence would be adduced so frequently, that the risk of it outweighs the advantages which must arise from true evidence from the same source being admissible? Why assume that the falsehood would pass undetected, or that the chance of its detection would not usually lead the prisoner or his advisers to avoid tendering it? Why proceed in this instance on the assumption of guilt in all accused persons, and perjury in their husbands or wives, and misleading of the jury into erroneous verdicts of acquittal? Why give in this instance all the benefit of the doubt against the accused? I think the ends of justice would be promoted, without imperilling domestic peace, if, 1st, the husbands and wives of accused parties were competent witnesses for them in all cases; 2nd, if they were not competent witnesses against them, unless with the accused's consent; and 3rd, if they were allowed to decline to give evidence at all, or to answer any question put to them. It is almost unnecessary to add that if the exclusion is objectionable in the usual case, its corollary, which excludes the wife or husband of one prisoner as a witness for or against another, is still more so, and ought, at any rate, to be abolished.

III. I pass now to the third ground of exclusion, namely, on account of want of belief in a God. This exclusion proceeds on the grounds, 1st, that it is supposed one who does not believe in a Supreme Being will not fear that divine justice will overtake him if he speaks falsely; and 2nd, that he cannot take the judicial oath. The latter ground at one time excluded

the evidence of all who, from religious conviction, considered it wrong to take an oath. It has been removed as to them, and can hardly be maintained as to any others. Looking at the exclusion only on the first ground, it will be seen to assume that the evidence of such persons is not to be believed, and that its falsehood would probably escape detection and mislead the jury. I take leave to dispute these propositions. The number of men of high personal character, honourable and trustworthy, who, after careful and thoughtful inquiry, have come, I believe erroneously, to the conviction that there is no personal Deity, is considerable, and includes not a few men of as accurate powers of observation, as clear intelligence, and strength of memory, and withal of as high culture and exemplary life, as the world has ever seen. On matters of scientific inquiry, on history, on the ordinary affairs of life, no one hesitates to believe them; and the records of their observations and experiments are accepted by all the world as not merely true, but as eminently accurate and trustworthy. Yet men such as these are excluded as witnesses by the same law which admits the most ignorant and stupid of the population, with no real religious opinions at all—children so young that they can but dimly understand and unreasoningly accept a few rudimentary religious truths,—the votaries of the most superstitious faiths,—ignorant savages, if they only believe in a Supreme Being,—men convicted of perjury and of every phase of the *crimen falsi*, and steeped from childhood in vice and crime, or (perhaps worst of all) men whose vicious lives belie their shallow or pretended religious convictions. It was pointed out in a comparatively recent case that the exclusion also involves a contradiction, because the witness is excluded on his own statement of his want of belief, which *ex hypothesi* is incredible. The witness is excluded because he credibly states the ground of his own incredibility, and thus the only evidence which the Court will allow him to give, being on a matter of no moment in the cause, is practically the only ground for rejecting all evidence which he could give on matters of fact, on which a just decision in the cause depends. In a country like ours, where scepticism is not the fashion, there are no inducements to leaving the broad lines of the national faith; and it cannot be said that it is those who love truth least who do so. Sometimes a love of truth almost morbid, a determination to accept no doctrine which is not absolutely demonstrated to be true, and an honest searching into the foundations of all knowledge, have shaken the faith once accepted uninquiringly, and have landed the unhappy speculator in unbelief. Probably every one who

hears me knows some such men. Can it be said that they are less truthful than the rest of the community? I think not. On the contrary, I believe that truthful evidence may be expected from them as much as from any other class of witnesses, and more than from the vast majority of those who are daily examined. Besides, the exclusion operates against the public generally, while the person excluded seldom suffers from it. If intended as a stigma or punishment for infidelity, it usually does no harm to the party himself; whereas the want of such evidence may cause to others the loss of most important civil rights, and an unjust conviction or acquittal of the most heinous crimes. These are serious evils, for which there is no ground either in principle or expediency. Again, the maintenance of a religious test for witnesses is an anachronism, after it has been abolished in regard to all secular offices, including professorships of lay chairs. Truthfulness is surely as necessary for the due discharge of the functions for which no such test is required, as for giving evidence in a court of law. The same love of religious liberty which has abolished religious tests elsewhere should sweep it away from the witness-box.

The exclusion has been abolished in the case of certain witnesses of almost the lowest possible class, by a statute passed in 1843 (6 Vic., c. 22), recognising as valid Acts of colonial Legislatures which admit the evidence (I quote the words of the Act) 'of barbarous and uncivilised people who, being destitute of the knowledge of God and of any religious belief, are incapable of giving evidence on oath in any court of justice.' I doubt if there is a greater contradiction and absurdity in the laws of any country than to maintain the exclusion against its civilised citizens, including men of the highest culture and morality, as witnesses before tribunals unsurpassed by any others in the world, after legalising its abolition as to ignorant and brutish savages, often not its citizens, when adduced before tribunals usually inferior.

IV. I must deal briefly with the next class of exclusions (which exist only in Scotland), on the grounds of enmity, bribery, tutoring, and presence in court under certain circumstances during the examination of other witnesses. The two first—enmity and bribery—assume such strong prejudice on one or other side as renders the evidence incredible. This may do no harm in extreme cases. But the bribe may be a trifle and the ill-will may be slight, and in such questions of degree it is impossible to draw the line by rules of law. The attempt has produced artificial rules and distinctions, as well as contra-

dictions. Thus, a bribe, and even a rejected offer of one, however small, from one of the parties, excludes; while a bribe, however great, by a stranger, or in criminal cases the promise of a reward, however high, by the authorities, for the detection of the crime, does not. In civil cases expressions of enmity, made perhaps thoughtlessly, if founded on serious injury, will exclude, yet enmity more bitter but groundless, or harboured silently because deeply, will not; while in criminal cases the accuser is heard, no matter how strong and how much provoked his hostility to the accused may be.

'Tutoring,' or the improper instructing of a witness by the party adducing him, excludes, on the assumption that the witness will follow the instructions and speak falsely; or, if not, it punishes the party by the exclusion *in odium corrumpentis*, without discriminating as to the importance of the issue and the unimportance of the fact to which the tutoring applied, or as to the light which the witness could throw on the question in issue.

The presence of the witness in court during the examination of other witnesses used always to exclude, on the ground that his evidence might be influenced by what he heard. The Evidence Act of 1840 gives the Court discretion to admit the witness where 'it shall appear to the Court that his presence was not the consequence of culpable negligence or criminal intent, and that he has not been unduly instructed or influenced by what took place during his presence, or that injustice will not be done by his examination.'

All these grounds of inadmissibility ignore the differences in disposition, character, and habits among mankind. They assume that what is likely to lead some will lead all to falsehood; that the witness will not tell the truth on other facts equally or perhaps much more important compared with those on which he is expected to speak falsely; and that, notwithstanding the examination and cross-examination by the Bar, farther examination from the Bench and jury-box, and comparison of the evidence with other evidence in the cause, it will mislead the jury and defeat the ends of justice. It is almost unnecessary to say that these assumptions are erroneous. I propose that the law of Scotland should be assimilated on these matters to that of England, where such considerations only affect the credibility of the witness.

V. The last ground of exclusion is outlawry, or loss of civil status, pronounced by one of the Superior Courts upon a person charged with crime failing to appear for trial. It is intended as a punishment for contumacy; but it does little or no

harm to the party against whom it is directed. It really punishes the innocent litigant who requires his evidence, which is not supposed to be incredible. Although the exclusion on this head is rare, it might cause grave injustice. I propose that it should be abolished. It does not exist in England.

I have thus answered affirmatively the question submitted for discussion, and have endeavoured to show that the exclusionary rules as to classes of witnesses cannot be defended upon any of the exceptional grounds, but should be abolished from regard to the great general principle noticed at the outset. I conclude with expressing the earnest hope that the course of legislation, which, running without deviation during the last 35 years, has removed many of the old obstructions to full and fair judicial investigation, will ere long sweep away those that remain.

On the same. By Mr. SERJEANT PULLING.

THE question of the removal of restrictions upon the admission of testimony has only recently come to be fairly considered. These restrictions in our law were really based upon dogmas which, until very recently, had all Westminster Hall for their apologists. To run counter to any of these dogmas was to incur the risk of being branded as ignorant as well as chimerical.

Dogma No. 1 laid it down that no one could be admitted to give evidence in his own favour, or be legally admissible as a witness in any case involving matters in which he had any pecuniary or other appreciable interest—such interest, according to the legal authorities, *ipso facto*, incapacitating him. Dogma No. 2 pronounced as a disqualification nonconformity on the part of the proffered witness with the ceremonial part of the oath. Dogma No. 3 rejected as infamous and incredible the witness already convicted of crime—this disqualification being in some cases perpetual, in others temporary; and dogma No. 4 closed the mouth of the person suspected or accused of crime in any inquiry involving, or supposed to involve, the question of his own guilt or innocence, on the double ground of incapacity in respect of interest in the concealment of the truth, or disclosing it, and of privilege under the rule that *nemo tenetur prodere seipsum.*

As the result of all this, followed the exclusion of the truth in all cases where the proffered witness had interest in the cause, or was sufficiently conscientious to confess to religious

convictions opposed to the prevailing opinions, or where the witness, however credible his statement, had on him the brand of a previous criminal conviction. That the mouths of the actual parties to a civil suit and of the person directly accused in a criminal proceeding, should be legally closed, followed as a necessary consequence, whatever injustice and hardship such stifling of the truth might bring about. When Bentham, half a century ago, denounced these dogmas, and preached that, inasmuch as evidence in judicial investigations is the basis of justice, to exclude evidence is simply to exclude justice, Westminster Hall declared this advocate of truth in judicial inquiries to be an impracticable theorist. How reason has prevailed over pedantry, and Bentham shown to be right and Westminster Hall wrong, is a matter of history—the history of law reform with which the Law Amendment Society is so closely identified.

The old legal disqualification of witnesses on the ground of religious opinions or conviction of crime has gradually disappeared from the English code. When, 130 years ago, it was solemnly decided that others than professed Christians might go into the witness-box, and that the testimony of a Hindoo could be received in our courts, the principle admitted was so striking that the decision became, and has ever since been counted as, one of the leading cases in the law of England. The Legislature in the present reign has thought well to remove all obstructions to the testimony of witnesses on the ground of religion or crime, leaving the credibility of the witnesses in every case to be disposed of as part of the subject matter of the immediate inquiry.

After a strenuous opposition on the part of the adherents to the old dogmas, objections to testimony on the ground of interest have gradually come to be dealt with in the same way as legal objections on the ground of character. Indeed, the first blow to the old law of incompetency began in 1833, when the first of the series of acts for the amendment of the law provided, as a legal cure for the legal objection to an interested witness, that the verdict should, so far as he was concerned, be altogether inefficacious. (3 and 4 Wm. 4, c. 42, ss. 26 and 27.) Ten years later, the Legislature, at the instance of Lord Denman, put an end to the objection *in se*, and nearly every vestige of the old law was removed by the provision, that even the actual parties to the suit in civil cases, and their husbands or wives, should be competent, and compellable to give evidence. The experiment was first tried in the County Courts, and in a short time the rule was established in all civil cases

that being a party to the cause affords no objection to a witness legally excluding his testimony, but a circumstance only which, with every other involved in the case immediately under consideration, the tribunal, judge or jury, to which the investigation is submitted, have to weigh and dispose of. In our Equity Courts and in Arbitrations it was always deemed necessary to provide for the examination of the parties to the suit in order to get at the truth—we have now come to admit that justice requires such an examination wherever the truth cannot be got at in any other way.

The rule which inexorably excludes the truth in criminal cases, where it cannot be got at except by the examination of the accused, can hardly be justified, unless a different test is to be applied to evidence in criminal cases from that which applies to civil cases; unless it can be shown that the restriction upon the disclosure of the truth brings at least an equivalent advantage to that which is inevitably lost. When death was the penalty of conviction, and the accused, arbitrarily deprived of legal assistance in his defence, would have been exposed to have a confession of guilt, true or false, extorted from him, without some rule for his protection equally arbitrary, the old maxim *nemo tenetur prodere seipsum* was a necessity. It was to a great extent an artificial contrivance by way of protection against a system of mere legal oppression. Happily our present system is not open to any such imputation. The accused at this day is allowed to make his defence divested of the trammels imposed on him by our forefathers, and as the system of capital punishment has become a thing of the past, there is no longer the fear of an irremediable miscarriage of justice by an erroneous conviction of the innocent. It is at this day a more serious question whether, for the advantage lost by the miscarriage of justice in the escape of the hundred guilty criminals, there is really an equivalent advantage gained by the supposed prevention of the accident of one innocent person being convicted. The notion of good from the existing system, and of evil from the accused letting out the truth, is carefully inculcated on our magistrates and police constables, with their limited knowledge of their real duties; and it is hardly possible to be present in a criminal court without observing how systematically truth is shut out, and how little the gain from its exclusion; how this exclusion of the whole truth in the case of the innocent unjustly accused becomes an unmitigated evil; how mischievous the evil of excluding the truth becomes in augmenting the number of criminals by encouraging the notion that the course of justice has so many obstacles in its way.

I would, in order to meet all the objections that could reasonably be urged against adopting in criminal prosecutions, as far as practicable, the same principles of evidence as we have come to deem right in civil proceedings, suggest the following as amendments of the existing law, which may be safely admitted without the risk of justice being perverted by the oppression of the accused:—

1. Let the accused, in any stage of a criminal proceeding, be allowed to tender his own testimony in his exculpation, subject, of course, to the ordeal of a cross-examination.

2. Let the man who, in any case, in order to justify himself, seeks to impute crime to any one else, be *de facto* subject to examination *vivâ voce*.

3. Let the presiding judge, in every case where a *primâ facie* case of guilt has been made out, have power to call on the accused to answer it by his own testimony, or take the consequences of his silence.

By these simple amendments of our law of evidence a salutary check would be given to the outrages upon propriety, too often witnessed in our courts, of a man steeped in crime being allowed, from the masked battery afforded him by the abuse of the rule against self-crimination, to asperse with entire impunity all who, in furtherance of justice, are adduced as witnesses against him, or whom the accused or his advisers may wish to injure.

It was counted in old times a singular privilege, by the custom of London, that under certain circumstances a citizen accused of crime might exculpate himself by his own oath. It is sad to contemplate the case of any one who could by his own testimony really exculpate himself being prevented from so doing. It is equally deplorable that justice should in any case be systematically thwarted by the suppression of the only testimony which could supply the real truth.

On the same. By Mr. Serjeant Cox, Deputy Assistant Judge of the Middlesex Sessions.

PRESUMING that this question is designed to apply alike to criminal as to civil courts, I propose to deal with it in its relation to both.

So large has been the extension of the admissibility of witnesses by recent legislation that it is difficult to say who is now excluded in our civil courts. I know of none whom it would be desirable to admit who are not now admissible. But some have been admitted who should not, and experience has

proved it to have been a mischievous mistake. The two instances to which I particularly refer are the incriminated parties in divorce suits, and the plaintiffs in actions for breach of promise. In neither case is it possible to obtain the truth. In divorce suits on the ground of adultery, questions involving admission of guilt will fail to elicit a truthful answer. A code of honour is tacitly recognised by society which exercises the utmost influence over the vast majority of persons. As a matter of fact (lamentable as such a perversion of judgment may be) perjury is held in less disesteem by ninety-nine persons in a hundred, whether men or women, than would be a confession compromising a woman. All in their hearts, whatever their lips might say, prefer the man who swears 'No' to the man who makes public confession of his paramour's shame. This reticence on one subject is not the fault of men only. My experience of courts of justice, criminal as well as civil, alike as a judge and as a magistrate, has satisfied me that it is perfectly hopeless to procure from a woman when a witness an admission of immorality. She appears to consider it a subject upon which no person has a right to question her, and that she is justified in meeting inquiry with a plump negative. Evidence in such cases is wholly worthless.

A grave mischief has also resulted from the admission of the woman to prove a breach of promise of marriage. It has offered to the unscrupulous, the malicious, and the avaricious among them the greatest possible temptation, if not to deliberate perjury, to such a prejudiced view of the case as to lead them into exaggerations even more destructive to the administration of justice than pure invention. It holds out a positive premium to ingenuity in the art of trapping, and afterwards of making a case by colouring some incidents and suppressing others. This tendency is too often encouraged by the weak sentimentality of juries, not always sufficiently anticipated by the plain common sense of judges, who should tell to them rationally what their own experience must have taught, that the real cases of wrong are not those in which the woman seeks pecuniary solace for wounded feelings. Nor is this all the evil that has resulted from the unfortunate admission of the woman as a witness in her own case. To one instance that comes into court it is well known that there are twenty in which unscrupulous women and their still more unscrupulous legal advisers use the bad law as an instrument of extortion, knowing the reluctance of their victims to be made the subject of abuse in court and of ridicule out of it.

Therefore we require rather to retrace our steps somewhat in the civil courts. It is in the administration of criminal justice that the exclusions of witnesses are continued, and in which the question of their removal really arises for discussion. To this, therefore, I will now address myself.

The views to be propounded are the results of very considerable experience. The exclusions are limited to (1) the criminal; (2) the husband or wife of the criminal; (3) a person included in the same indictment and on trial for the same offence; (4) the husband and wife of such person.

(1) The defendant. The question of the propriety of admission of the accused as a witness for himself has been debated so often and at such length that the arguments (*pro* and *con.*) must be familiar to all. I will therefore offer only a summary of them.

In favour of admission, it is urged, with much apparent power, that in our civil courts we now exclude no witness on the ground of interest, the truth being more likely to be elicited by a full hearing of all that anybody has to say upon the matter of the inquiry, the jury being competent to form a fair judgment who is speaking the truth and where the truth lies; that an innocent man has nothing to fear from the most searching cross-examination, but that, on the contrary, the more severe it is, the more will his innocence be made to appear; that if the guilty are thus led to convict themselves, so much the better for society.

These are powerful arguments, but experience in criminal courts best answers them.

The cases are not parallel: the interest, consequently the inducement to falsehood, is infinitely greater. Either the jury would give credit to such a witness, or they would not. If they did not, it is a sheer waste of time to put him into the witness box. If they did, the clever rogues, with the mental ingenuity so often found in those who make crime a profession, would certainly invent plausible stories, which they would impose upon the court by their manner as much as by the matter, and too many of them would thus escape. As it is, juries are continually taken in by a cleverly concocted story told by the prisoner when called on for his defence, and under the proposed plan this would be far more frequent. But the majority of criminals are what we may term 'accidental' criminals, tempted to crime by some sudden desire, or some apparently simple means appearing unexpectedly by which they might gratify some passing want. These are the majority of the criminals tried, and are as much below the average of intellect as the

professional thieves are above the average. If the prisoner presented himself for examination, he must be cross-examined also. He would certainly be confused by the confusing skill of a sharp counsel, and made to appear guilty although really innocent. The answer to the suggestion that the more the inquiry is pressed the more certainly will innocence appear is not the truism it is supposed to be. It is true of scientific investigations, and of political, philosophical, and theological inquiries; but it is not true of inquiries into the conduct of the individual subject to such an ordeal. It must be remembered that there is always something against the prisoner, or he would not be put upon his trial. Some circumstances of a suspicious nature must have occurred with which he was associated. He may be desirous to explain these, and it seems hard he should not. But, as a matter of fact, these suspicions can be wielded against him by the cross-examining counsel, and he would easily be brought to confusion by the arts sufficiently familiar in our courts. The judge would also question him, and he would be asked to explain this or that, why this was done or that was not done, and the most innocent might thus be made to convict himself. In the interest of innocence, the present plan of permitting the prisoner to give his own account of the transaction, without subjecting him to a cross-examination, is infinitely more efficient, for if he tells a plain and probable story, it always carries as much weight with it to the jury as if given under oath, a sanction which, in a case of overwhelming personal interest, experience shows to be of very little value indeed.

But there are cases in which injustice results from the exclusion of the defendant—cases which, although criminal, gravitate somewhat to the character of civil wrongs, such as assaults, in which there is always a mutual complaint, and usually more or less of mutual wrong. Embezzlement is an offence so entirely within the cognizance of the defendant that he ought to be heard to explain, if he desires to do so. The sweeping decision of the Queen's Bench on the passing of the Evidence Act admitting parties as witnesses, that where the law imposed a penalty, even if but a small fine, it was a *quasi* criminal offence, and therefore not within the Act, has wrought much injustice. It is under this decision that, even in cross summonses for assaults, the parties cannot be heard each in his own case, although each is admissible in the case against the other in excise prosecutions, and many of the like kind that come before magistrates. In all these the exclusion should be abolished, and it should be wholly limited to indict-

ıble offences not within the jurisdiction of magistrates. In all cases of summary conviction, excepting larceny, the parties should be competent and compellable—competent to proffer themselves, and compellable by the other party or by the magistrates. Nothing can be more absurd than the present practice in assaults, for instance. They usually resolve themselves into the question which struck the first blow, or what was the nature of the provocation. In questions of assault it is impossible to obtain from the complainants the slightest approach to the truth. Whether it is that passion blinds them to all that is passing about them, or there is a natural reluctance to appear to have been in the wrong, I know not; but the assertion will be endorsed by every experienced judge and magistrate, that the complainant swears he or she (most frequently *she*) was meek as a dove, offered no insult, returned no blows, simply submitted without a murmur to the barbarity of the defendant. Usually there is a rush to the justices clerks' office to obtain the first summons, so by the present rule of evidence to have the double benefit of telling his own tale and closing the mouth of his adversary. A cross-summons, as it is called, partially defeats this design if the magistrate is wary and insists on hearing both before he decides either. Then the late defendant, now complainant, tells his story in his turn, and it is precisely the opposite to the other. Now all the wrong was done by the meek personage on the other side. The provocation came from him alone, he struck the first blow and followed it by others, as witness the black eye and the torn garments. The truth probably lies between the two stories. But the moral to be drawn from the continual recurrence of similar cases is, that both parties ought to be heard upon oath in matters which savour more of civil wrong than of criminal offences.

The other objections to admitting the defendants as witnesses in criminal trials before a jury may be thus briefly stated.

First, an innocent man may be entrapped into admissions that might convict him.

Secondly, the prosecution would always say or insinuate that if he can answer the case he can put himself into the witness box, and if he declines to do so the inference will be obvious. It has been proposed to remove this objection by expressly enacting that it shall not be urged against the prisoner that he would not tender himself. But it would be impossible to prevent the jury from implying an admission of guilt, and the consequences would be much the same.

Thirdly, if more than one is upon his trial, either of tendering himself might easily be made to convict the other by admissions damaging to them, though not directly leading to proof. As, for instance, he might be asked as to his own antecedents, and then if the others had not been known to him, the degree of his companionship, and so forth; and thus their case would be prejudiced by his act, although they had declined to follow his example. And again, their refusal to do what he has done, however strictly within their right, would tell against them in the opinion of the jury, and influence the verdict.

Fourthly, the practice, however temperately acted upon at first, would, in the emulation of counsel, gradually become more and more stringent, and in the end the defendant would be subjected to a species of moral torture which may sometimes elicit truth and convict the guilty, but sometimes also convict the innocent.

Fifthly, it would have the disastrous effect of bringing the administration of criminal justice into disrepute with the classes who are most subject to it. With all its faults, with its undoubted laxities, its facilities for the escape of the guilty, and the general mildness of its administration, it may prefer the proud boast that it is looked upon with respect and even satisfaction by those who are most liable to come within its penalties. All our other institutions are more or less the subjects of attack, and almost of opprobrium, among large sections of the community—but never the criminal law, nor the judges, nor the juries who administer it. Nothing is more remarkable to those whom duty calls to our criminal courts than the general acquiescence with which verdicts and sentences are received, not by the listening public only, but by the prisoner and his sympathising friends. They see and know that he has had fair play, and that of itself is a mighty lever to the hearts of Englishmen; they know that all has been said for him that can be said; that every chance has been given to him, every point in his favour taken, if not by the counsel, by the judge. They have seen how throughout the trial the prisoner, be he what he may, has found in the judge a friend, who will see that justice is done to him, and in the jury a patient attention to all that is said for him as well as against him, to all that he may have said for himself, and an equal desire not to find him guilty unless he has been clearly proved to be so. Then the judge, leaning to mercy when mercy is possible consistently with justice, measures out th

punishment which the prisoner knows that he deserved, and which is commonly much less than he had anticipated.

This it is that has given to the criminal law the confidence with which it is received by the whole public, down to the very lowest, who know no other law; and, indeed, every member of the community, whatever his condition, high or low, owes not a little of the sense of security, which is so much our birthright that we are scarcely conscious of the greatness of the blessing, to these very forms which it is the fashion with closet philosophers to abuse. They are barriers against oppression, protectors against accidents that at times may throw suspicions even upon the very best of us. I hope we shall be slow to remove any of those barriers. The old saying that better ninety-nine guilty men should escape than one innocent man be convicted is as true now as when it was first propounded, but for a reason different from that usually assigned to it. It is not that the salvation of one innocent man is to be set against the restoration to society of the ninety-nine rogues, but that it is the knowledge every man has that the law and its administration have thrown such safeguards around innocence, which gives to him the confidence, possessed by no other people than ourselves, that he can rest in the assurance that, come what may, so long as he is guiltless, he may sleep in peace; and that no circumstances of suspicion, to which the best are liable in the complications of human affairs, will endanger his liberty—because our criminal courts jealously maintain, and ever may they do so, the wholesome maxim that every man shall be presumed to be innocent until he is proved by legal evidence to be guilty.

DISCUSSION.

Professor Berry (Glasgow) thought they all agreed in thinking there were various departments of law in which it would be desirable that the evidence of parties at present excluded as witnesses should be admitted. He quite approved of the provisions of the Indian Act of Mr. Fitzjames Stephen by which the evidence of husbands and wives was admitted, except in criminal cases. He could not see why marriage should exclude the evidence of parties, whether for or against the prisoner, where the evidence be admissible if marriage did not exist. In the well-known murder, a good many years ago, in Norfolk, the prisoner was convicted mainly on the evidence of the woman with whom he lived, and to whom he had not been married. Her testimony as to his absence from the house during the night of the murder clearly brought home the crime to him, whereas, had the woman been his wife,

her testimony would not have been received. As a Scotch lawyer, he felt very much that the law of Scotland wanted the light of public opinion directed to it. We live in a country in which law was treated as matter for lawyers more exclusively than was the case in England. In England, if there was a blot discovered, it was discussed in the newspapers and a remedy speedily introduced by Parliament. There was no such public opinion in Scotland; the law was relegated entirely to professional men. He referred particularly to the blot existing in the Scotch system by the exclusion of parol evidence in many cases in which people in England would be perfectly astonished to hear of its exclusion. His English brethren would be surprised to learn that in an ordinary transaction of life, such as the payment of money, it was a rule of Scotch law that payment could not be proved by parol evidence where the sum was above the magic amount of 100*l.* scots, and cases occurred in which the party who had received the money was dead, and there was no possibility of referring to his oath, as was the rule in Scotland borrowed from the Roman law, and in consequence of this great injustice often resulted.

Professor DONNELL (Dublin) said, from his experience in Ireland, he could give one interesting case which illustrated very forcibly and vividly the necessity for some such change in the law as was advocated in the papers just read. At the last assizes in the county of Antrim, five men were charged with riot, and their mouths being closed by the law of evidence, all the five were convicted. The next day the circumstances of the same case came up as a civil cause, in which, under the Peace Preservation Act, a claim for public compensation, amounting to 5,000*l.*, was made by the wife of a person who was alleged to have died from injuries received in the riot. Believing that an injustice had been done by the exclusion of the evidence of the five accused persons on the preceding day, he had them produced as witnesses in the civil cause, and the result was, the claim for compensation was refused, and, as a further consequence, Judge Fitzgerald was so perfectly satisfied of their innocence that he remitted the penalty of three months' imprisonment which he had imposed upon the five men the day before, and they were all liberated.

Mr. H. N. MOZLEY (London) said that, as to the supposed exclusion of witnesses on religious grounds—for unbelief—the Evidence Act of 1869 had wholly abolished all such exclusion. As to the injustice existing in Scotland, and referred to by Professor Berry, in regard to proving a debt, the same thing existed under the English law, although he did not say it prevailed to the same absurd extent as in Scotland. It had been held, however, in England and Ireland, that where a claim was made against the property of a deceased person, and was supported merely by the unsupported evidence of the claimant, the claim could not be allowed. The objections urged in the paper of Serjeant Cox to the exclusion of the evidence of prisoners did not, he thought, touch he principle of the matter, and, moreover, he did not think the learned Serjeant had grappled with the monstrous practice of excluding the evidence not only of the wives of prisoners but that of co-accused persons. Another thing was, supposing a prisoner employed an in-

competent advocate, his mouth was closed; he had no chance of giving an account of himself, because he would be told his counsel would speak for him. He thought the hypothetical objection as to taking a prisoner at a disadvantage by cross-examining him might be got over by giving him notice of the points on which he would be questioned.

Mr. HANS MCMORDIE (Belfast) advocated the admission of the evidence of husbands and wives of accused persons. He thought, if accused persons were allowed to make any explanations, they should be compelled to go into the witness box and answer questions like other witnesses. He certainly was inclined to look upon our present mode of extorting the truth from witnesses as discreditable to our civilisation. Those who had seen what occurred in courts of justice must have observed that even the safeguard of an oath was no guarantee for telling the truth, and, as a matter of fact, no judge would take the absolute statement of a witness in the box without weighing it and taking probabilities into account as if no oath had been administered at all. The idea of the thing was utterly immoral. It was a great pity that under the sanction of law the higher parts of religion should be travestied in such a manner; it was bringing down the most solemn subjects level, and thereby injuring the propagation of religious faith in the world. He saw no distinction between telling an untruth and swearing a lie, and he was of opinion that the man who would not tell the truth if there was no oath would not scruple to swear an untruth.

Mr. R. V. CAMPBELL (Edinburgh), advocate, said that it was not the case that in courts of justice they should take all possible means of ascertaining facts. Any one had only to cross the Channel to ascertain the evils attendant upon acting upon that principle. Any British subject who saw a French criminal trial must come away with the impression that it was unfair. No doubt we wanted to get at truth in a court of justice, but we ought not to take every possible means of getting at the truth. There were three principles on which witnesses were excluded, two of which were utterly bad, but the third ought to be maintained. The first principle was that which proceeded on the ground of religious belief, and as that was simply affixing a social stigma on a particular form of belief, and condemning any one who was so honest as to proclaim an unpopular opinion, he thought that ought to be abolished, and all witnesses admitted, whatever might be their religious beliefs. The second principle was that of interest, and that was a good principle, but it was not properly applied. The evidence should be admitted, and the judge should apply the principle in his own mind, and have the fact of the interest of the witness before him in judging of the credibility of the evidence, which should certainly be taken for what it was worth. But there was a third principle, and that was the principle of securing the complete fairness of our procedure. For example, it would not be right to compel an attorney to go into the witness box and reveal facts which the accused had told him in confidence as his agent. In the same way, he thought that the relation of husband and wife should be regarded as sacred, and that no wife ought to be asked to reveal facts which might be prejudicial to her husband. The accused should always have an opportunity of declining

to answer questions, and should not be subjected to the tortur rigid examination, though he thought that in this country that be safely left to the judges, who would protect the accused from unfairly treated. He hoped that, whatever changes might be m our system, the criminal procedure of this country would alw characterised by a spirit of fairness, moderation, and liberality accused, so that it would never appear as if society were anxi hound down a poor wretch and obtain a conviction against him.

Sir COOMARA SWAMY (Ceylon) said that to extract truth by an of means would be highly objectionable, whether here or in the At the same time, he had found the laws of evidence, admirable a were when applied to the state of society here, deficient as appl the state of society elsewhere, and that showed the necessity of into consideration the different conditions of the people to who laws were applied. What was good for England might not be g India, so that we must consider, not what was absolutely goo what was relatively good, taking the condition and circumstan the country into consideration. From what he had seen in th of the application of these rules of evidence, he had found very that the exclusion of witnesses had led to the exclusion of wh right and just, and had prevented the attainment of the real Even by the admission of hearsay evidence the truth was som discovered. As to oaths, he did not know what might be best f country, but in the East, so long as oaths were administered religious form, people spoke the truth, and the moment the optic given to the people to take an oath or make an affirmation, they the affirmation, and they did not speak the truth. It might b that was because they were not so far advanced in the East; h was merely stating the facts as they existed in the East.

The Rev. J. PAGE HOPPS (Glasgow) regarded the extortio he could use no other word—of an oath from an unwilling w especially from one who did not believe in the necessity for it, as i immoral. The public were in danger of suffering from the exc of evidence of witnesses on religious grounds. The question fo sion was whether we were, on the whole, sufficiently developed i country, morally and socially, to do without that painful, and in respects miserable, test of asking a man's religious belief befo would take his evidence. A little street Arab in London, when lately in a court if he knew what would be done to him if h a lie, said that he did not know very well, but he suppose God would put him in some burning fire. Now that was what t oath meant, 'If I tell a lie, God will punish me.' The questio whether that little Arab was to be believed in preference to a ma had fought his way out of the idea of the little Arab? Th excluding any man because of his religious belief did not excl lie, but it excluded truth-speakers. Men did not speak the trut fear of being punished, but because they valued the truth.

The Right Honourable Sir JOSEPH NAPIER, Bart. (Dublin), s had long held a very decided and clear opinion that an accused p if he thought fit, should be allowed to give evidence in his ow

› could not conceive a case in which a really innocent man did
›el that a grave injustice was done to him when his mouth was
. It was quite true that the prosecutor must make his case clear
ree from doubt, as well as perfectly complete in itself, but still,
› a case was made *primâ facie* against a man who had some ad-
circumstances weighing him down with suspicion, he had not
›pportunity of laying before the jury any evidence which he
perhaps could give in his defence. He admitted that in the great
ity of cases the persons accused were really guilty, but then a
›ould occur now and again in which a really innocent man was
›d, and he might know circumstances which would establish his
ence which he could not establish by the testimony of witnesses.
› a grave injustice that a man, knowing the whole material facts
case, should be compelled to send his case to the jury without
›enefit of his evidence. The anomaly and absurdity appeared
–the accused might subsequently prefer an indictment for per-
›gainst the witnesses who have borne testimony at his trial, and
›e got indirectly, but in a very bungling way, the evidence of
›an accused in the first instance. In civil causes the parties were
›d to give evidence. His opinion was that the rule of exclusion
› to be made as narrow as possible, and that the rule excluding
›d persons from giving evidence was unjust, unreasonable, and
›istent with the true character of British law. With regard
› case of an Atheist, he lived in a country where he never met
›o that if there were such beings they belonged to some com-
›y of which he was not a member. In England the evidence of
›an was admitted if he simply made an affirmation and declared
› be binding on his conscience.

›r. Charles Clark, Q.C., agreed with Sir Joseph Napier in thinking
›le of exclusion should be made as narrow as possible. But he
›remark, at the same time, that admission of parties as witnesses
›ir own cases had with many people broken down the habit which
›l before, of looking with fear upon telling untruly anything
›ight not serve themselves. The change had been good in some
›ts, but it did not bring an unmixed good. In fact, it was like
other things in England—we allowed an evil to go too long,
›en compensated for that error by applying a remedy too exten-
The general principle came in, that by excluding at all times
›rsons having an interest in the case we often did great injustice.
›ere therefore called upon to accept one of two evils, and we had
›ed that one which admitted the evidence of interested parties
›ly in all civil causes, but in all parts of civil causes. We did not
›t its reception to points which must necessarily be left incomplete if
›arties did not give evidence. There were certain great principles,
›er, in regard to exclusion, which ought not to be broken in upon at
He agreed with Mr. Campbell that the relations of husband and
›ere so important and so sacred that it was better that a number
›ilty persons should be allowed to escape justice than that there
›d be universally spread the belief that there could not be com-
confidence between husband and wife. The relations of mar-

riage were universal—the perpetration of crime was happily not so —and the happiness of the greater ought not to be sacrificed to the probable needs of the less.

Mr. G. W. Hastings (London) was in favour of admitting prisoners as witnesses in their own behalf. When in America he asked every judge in New York, and certainly more than one in the State of Massachusetts, how the law admitting prisoners to the witness box had wrought, and they were unanimously of opinion that it wrought admirably, and was a great improvement on the previously existing system. And it was very curious that that should be their opinion, because the law was passed more by accident than deliberate intention. He was in favour of the system because he could not help seeing how well it had operated wherever it had been tried in this country, and the whole of the judges now fully approved of the changes recently made in the direction of allowing the evidence of parties interested. Within the last two years persons charged with offences under the Licensing Act in England had been admitted as witnesses in cases before Petty Sessions, and he had seen no mischief resulting from the rule; and in several cases he had been a great deal assisted by the evidence of the defender. In Quarter Sessions, in trying cases with a jury, he very often regretted that he was not able to take the evidence of prisoners. He said that in the interest of the persons accused. There would shortly be a trial in which the advantage of allowing the evidence of parties accused would be very evident—he referred to the trial for manslaughter of the inspector and telegraph clerk, in the case of the railway accident at Thorpe. Could anyone imagine a case in which it was more important that the evidence of the parties accused should be admitted? No one else knew anything about the cause of the accident. It was simply a dispute between these two men as to whether or not a particular order was given. The public now understood the matter, because both the parties had been able to tell their tale before the coroner and Captain Tyler; but when these men were indicted their mouths would be closed, and there would not be a single witness that could be called to throw light upon the question how the blame of the accident should be apportioned between these men. In the interests of justice, therefore, and in the interests of the innocent, these two men ought, if the law allowed it, to be put into the witness box to state what took place. As to excluding evidence on the ground of religious belief, there was no doubt that, as the law of England now stood, any one could give evidence on taking a declaration instead of an oath, whether or not he believed in the existence of God. He had drawn up the Act 24th and 25th Victoria, 1869, on that subject. It was his intention by that Act to remove altogether the disabilities that had attached to such witnesses, and he believed he had succeeded in accomplishing that object, and had removed the obstacle so far as England was concerned.

Mr. Sheriff Dickson, in reply, admitted that he had perhaps been in error in supposing that the exclusion of witnesses in England, which prevailed five years ago, still remained. It was quite natural that such a mistake should be committed by a Scotch judge reading treatises on

the subject. His understanding of the law of England on the point mentioned had been that any person was allowed to decline taking an oath provided that he did not consider it right to take an oath, but that the benefit of taking an affirmation was not extended to persons who did not believe in a God. As to the general question of oaths, Jeremy Bentham had long ago dealt with it, and had shown that it would be much better were there no oath. The constant swearing of witnesses from the lowest classes that took place in trumpery cases in the Police Courts, and elsewhere, tended to bring oaths and religion into discredit. It was a strong illustration of the expediency of not taking an oath that the evidence of a boy who was too young for his conscience to be burdened with an oath was yet received by courts, while a grown man, with opinions that were the growth of conviction on the subject of the Deity, was not admissible as a witness in Scotch courts. He perfectly agreed with those who held that the sanctities of domestic life must never be invaded, and that to convict a man upon the evidence of his wife as to what he in the holy intercourse of marriage told her would be a most atrocious thing. But we should not exclude the evidence of a husband or wife when tendered for a prisoner, because really they might be the only parties who knew anything about the case, and yet, lest there might in some circumstances have been disclosures made in their domestic intercourse, it was made absolutely impossible for the prisoner to have put into the witness box the only person besides himself who knew what really took place, and who could probably establish his absolute freedom from the slightest stigma of criminality.

Sir Travers Twiss, Vice-President (London), in closing the discussion, said it was his opinion that the matter would be very much simplified in England if a public prosecutor was appointed, because, in the absence of such an official, an accused person might be subjected to an examination which was highly objectionable.

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*On the Constitution of a Supreme Court of Appeal for the British Empire.** By Alexander Edward Miller, Q.C.

THE movement which has at length led to the relinquishment by the House of Lords of their ancient jurisdiction as the court of last appeal from the superior courts of law and equity in the United Kingdom is due to the progress of a principle of very recent growth, at least in this country, which may fairly be described as 'Intolerance of Fictions.'

Down to a very recent period the current of public opinion set precisely in the contrary direction, and any institution which practically 'worked well' was regarded with all the more favour if it appeared by the aid of some ingenious fiction in the guise of some obsolete system which it had in fact super-

* See *Transactions*, 1871, p. 39.

seded. But this feeling is rapidly disappearing. Any one who will take the trouble to follow the course of modern legislation (disregarding cases whose form has been determined by the exigencies of party warfare) will find an ever-increasing tendency to rise out of—I will not say *above*—the question of practical workability, and endeavour to give to our institutions something of that philosophical symmetry on the absence of which, not so very long ago, we rather prided ourselves. It would be easy, were it of any moment, to multiply examples of this tendency, but we need not go beyond the case of the House of Lords to find an instance of the phenomenon in its completest form.

It is admitted, I may say on all hands, that the practical working of the House of Lords as a court of appeal has, at least of late years, been on the whole thoroughly satisfactory. It is not suggested that its judgments have been weak or unreliable, on the contrary, they command an amount of respect wholly disproportionate to the authority of its members *as individuals*; it is not alleged that its procedure is cumbrous or ill adapted to its object; it cannot be charged with any faults in the nature of delay (for it is absolutely without arrears), or with any greater expense than is inseparable from the careful and detailed investigation of questions of the highest importance by judges and advocates of the greatest eminence. The only serious defect in its constitution is that the sittings of the court are dependent upon the session of Parliament, and are consequently liable to interruption at all sorts of inconvenient times, and certain to be suspended during a considerable portion of every year. This could, however, be got rid of by an easy fiction: such, for instance, as constituting the Law Lords a permanent Committee of Appeals, with power to hear and report to the House notwithstanding an adjournment or prorogation, providing at the same time that the judgments of the House, when recorded, should relate back to the times when judgment was really given by the Committee. Not long ago some such expedient would have been adopted and considered satisfactory, while the *à priori* objection to the jurisdiction, which has in fact prevailed to its overthrow,* would not have been regarded as constituting any objection at all. That the jurisdiction is exercised not by the House but by the legal peers in its name would have been looked upon not forty years

* Throughout this paper I have assumed that the abolition of the appellate Jurisdiction of the House, provided for by the Act of 1873, as regards England, and acquiesced in as regards Ireland and Scotland by the Bill of 1874, is to be taken as now irrevocable.—A. E. M.

ago as no objection whatever, and yet this is the inherent deficiency which alone it has been found impossible to remove, and which in fact has caused the downfall of the system.

I have troubled you with these preliminary considerations because they seem to me to point out the principles upon which the new Court of Appeal ought to be constructed; that is to say, it is necessary to preserve not only those characteristics to which the House of Lords owes its practical excellence, but also those which gave it its prestige and secured general acquiescence in its authority. The former quality depended mainly, if not exclusively, on the individual eminence of its members; while the latter was due partly to the unity and continuity of its decisions, but also in a great degree to the fiction which indued it with a representative character. It was felt, particularly in Scotland and Ireland, that the House constituted not an English but an Imperial Court, so that litigants from all parts of the kingdom met there as upon common ground. One great difficulty attending the institution of a new court of appeal will be to preserve this quality without impairing the efficiency of the court; for it follows from what I said that we can no longer rely for this purpose upon any fiction. It will be of no avail to interpolate the word 'Imperial' into the name of the court, unless it be impressed with a really imperial character, and it will be hopeless to expect the courts, either here* or in Ireland, to tolerate that interference from any purely or practically English court to which they have cheerfully submitted so long as the court, though for the most part composed entirely of English judges, spoke from under the mantle of the House of Lords of the United Parliament. And yet the necessity of preserving this representative character will seriously interfere with the selection and qualification of the judges of the court.

I may here premise that the institution of a satisfactory court of final appeal seems to me to presuppose a complete system of localised courts of intermediate appeal, from all of which it should be essentially distinct. For if all the cases which reach the final court are to be heard, as they ought to be, by a body essentially, and not merely nominally, one, some means must be devised for so sifting the cases that none shall reach this final court which do not, either from the amount of property at stake or the importance of the principle involved, warrant that deliberate and thorough investigation which necessarily entails considerable expenditure both of time and money. This can-

* In Scotland.

not be attained without a system of double appeal. The judges of courts of first instance must necessarily be comparatively numerous, and the tendency to divergence of decision which is inseparable from the independent action of different minds can only be efficiently connected by constant and ready access to some common superior authority. It is therefore necessary to provide everywhere courts of first appeal, readily accessible, rapid in action, and inconsiderable in expense, which will at once correct the divergencies of the courts of first instance, and, by disposing finally of all the less important cases, reduce the work of the supreme court within practicable bounds. But as these courts must *ipsâ naturâ rei* be distributed amongst the principal local centres, so as to be reasonably accessible to appellants in all parts of the empire, it follows that they ought all to be essentially distinct from the supreme court, which ought to bear precisely the same relation to them all, and which can not under any circumstances be properly susceptible of any multiplication or subdivision whatever. But to this end the judges of this court must be permanent and distinct. I for one do not believe that any system can work satisfactorily which temporarily selects some few from amongst a number of judges of equal authority, and, without altering in any respect their status or emolument, clothes them for a limited period with a superior jurisdiction, which they are to exercise with the sword of Damocles, in the shape of the necessity for frequent reappointment, hanging over their heads.

Moreover, the reluctance which the non-English portions of the empire would naturally entertain to the supremacy of an admittedly English court would surely not be lessened if the court, though nominally 'Imperial,' were really but a division of a larger court whose other divisions were occupied exclusively with English appeals.

Besides, a court of last appeal ought obviously to consist only of judges of the highest eminence: it is not sufficient that it should *contain* such judges, because in this case, more perhaps than in any other, the strength of the chain is that of its weakest link, and the presence of even one judge of admittedly inferior calibre would have a very damaging effect upon the prestige of the court. It plainly follows that to fulfil this condition the court can never be very numerous.

Further, that unity of decision of which I have spoken can only be secured by so limiting the number of the judges that the court must ordinarily consist in great measure of the same individuals. If once you have a court sufficiently numerous to sit in divisions (in other words, if its effective strength

amounts to two full quorums), the judges will inevitably avail themselves of so ready a means of lightening their work by division of labour, and concurrent sittings of different divisions will in a short time become the recognised rule of the court. The history of the Court of Appeal in Chancery in England is an apt illustration of this. It certainly never was intended by Parliament to establish the Lords Justices as a court of concurrent jurisdiction sitting at the same time as, but separately, from the Lord Chancellor; but as soon as it appeared that the wording of the Act permitted this, that which was meant to be the exception was settled as the rule, and the sittings of the full court, instead of being, as intended, the ordinary practice, became so unusual that until lately such a sitting could only be obtained upon special application, for which some exceptional cause must have been shown. Hence we have had practically two distinct courts, however persistently they may have been called by a common name. This, which was of no great consequence in the case of courts subject to a further appeal, would be fatal to that continuity of decision the obtaining of which is one of the chief objects of the institution of a single supreme Court of Appeal. This consideration fixes the *maximum* number of the judges of the court at one less than two full quorums.

But the judges of this court must not only be separate and permanent; they must also be distinguished from all the other judges, whether of first instance or intermediate appeal, by superiority of position and increase of emolument. It is essential to attract to our proposed court, if it is at all to rival the prestige and authority of the House of Lords, the very first men that the legal profession can produce in any part of the empire. But this can only be done by making this court more attractive than any other judicial position in the country. Not only should the judges of this court hold office like other judges, during good behaviour; they should be given a precedence and paid a salary commensurate with the importance of the functions with which they are intrusted. What the precise amount of increased salary should be I do not care to inquire; but that it should be such as to make an appointment to this position an object of ambition to every judge in the empire, does not seem to me to admit of any reasonable doubt.

And at this stage I arrive at a point on which I have the misfortune to differ from both the very learned lords who have lately introduced bills into Parliament dealing with this subject. I can, however, claim as an authority in my favour the Act of 1871 for the appointment of the salaried members of the Judicial Committee. I am strongly of opinion that no one should

be appointed to a seat in this court direct from the Bar, and that these appointments should be reserved exclusively for judges of tried and approved experience. The position of a judge of a court of final appeal calls for the possession of remarkable judicial excellence, and this can only, in ordinary cases, be obtained by considerable judicial experience. Here and there a man of extraordinary capacity is recognised, even while still at the Bar, as 'a great judge;' but these cases are few and far between; while on the other hand even the most brilliant forensic career has more than once proved a prelude to unmistakable judicial failure. What should be a sufficient qualifying service as judge is a matter of mere detail, but I should suggest five years as supplying a satisfactory test of judicial capacity and a reasonable amount of judicial experience.

The next question is—What is the best number to select for a quorum? It has been found by experience that the presence of a large number of judges at once is not conducive to the efficiency of the court, whether because division of responsibility produces want of care in considering the case, or because the judges, in mutual reliance upon one another, relax their attention to the proceedings. There is a considerable concurrence of opinion amongst those who have most carefully studied this question that any increase of number beyond five is likely to impair the quality of the court. On the other hand, the numerical strength of a court of appeal ought obviously to exceed that of the court appealed from. Such is the constitution of men's minds, so hard is it to induce them to weigh rather than count opinions, that there is great danger lest any superiority (or even equality) in the number of the judges appealed from, as compared with those of the court of appeal, should tend to shake public confidence in the authority of the latter court. But no one, I should suppose, would think of suggesting a smaller number than three for a quorum of the courts of intermediate appeal: to do so would be to weaken those courts as compared with the courts of the first instance, and thus to multiply further appeals; in other words, to unfit the courts of first appeal for the very important function of sifting the appeal cases, so as to get rid of all except the most important of them, which alone should be permitted to reach the highest court. Hence it follows that we must fix a quorum of the supreme court either at four or five, thus making the maximum number of its judges either seven or nine. It is obvious that such a limitation of number must materially affect any scheme for giving a representative character to the court.

The question whether an even or odd number of judges is more desirable in an appeal court is one of considerable difficulty, and upon which opposite opinions have been held by persons of great authority. I find, however, a considerable preponderance of opinion in favour of an odd number, and this has in the particular case before us the additional advantage that by selecting five, and thus obtaining nine as the full number of judges, we have a far better chance of obtaining something approaching to an adequate representation of the different courts appealed from than would be possible with the smaller number.

The conclusion then at which we have for so far arrived is—That in every part of the empire there should be provided adequate local courts of appeal from all the courts of first instance within their jurisdiction, and that from all these courts (with whose constitution we have at present nothing to do) there should lie an appeal to one central and supreme court, distinct from and superior to them all; that this court should consist of not more than nine judges, of whom five should be a quorum, and should therefore be incapable of subdivision; that its judges should (with one obvious exception) be appointed during good behaviour, and should be paid a salary and given a position sufficient to induce every other judge in the empire to desire the appointment. It is, moreover, necessary, in order fully to maintain the authority of the court, that it should in some way or other, which remains for consideration, be impressed with a representative character.

There are four distinct sets of local courts which seem to require effectual representation in this court. Besides the courts in England, Scotland, and Ireland respectively, each of which must obviously have some share in the proposed court, we have the High Courts of Judicature in India and the Supreme Courts of the Colonies, from all of which an appeal now lies to the Judicial Committee, and is to lie to our new court, and which ought, as it seems to me, to be in some manner distinctly recognized in its composition. Having regard, however, to the nature of these courts, the qualification of their judges, and the extent to which they are at present represented or unrepresented on the Judicial Committee, I think that it will be sufficient to include them all in one class, which for convenience I will call 'Colonial,' and that no position lower than that of Chief Justice of one of the high courts in India or of a supreme court in one of the colonies ought to be looked upon as an equivalent to that of judge of the High Court of Judicature in England or Ireland, or Lord of Session in Scot-

land. To these classes, then, and to judges of not less than five years' standing in them respectively, I propose to limit the appointments of judge of the Imperial Court of Appeal. For convenience of reference I will henceforth speak of the Courts in England, Scotland, Ireland, and the Colonies respectively, as the 'Constituent Courts' of this Court of Appeal. I further think that all the judges of the court should be equally called upon to take part in all business which may come before it, and that no attempt should be made so to distribute the attendance of the judges as to give to any one of them any peculiar connection with the appeals from the courts from which he was taken. From whatever quarter he may have been originally appointed, he ought upon becoming a judge of this court to take part in all its business indiscriminately.

It only remains to consider upon what principle the requisite representative character should be imparted to the court; and here I am perfectly conscious that what I am about to propose is open to many of the objections which have been urged, and which I am about myself to urge, against the proposals which have heretofore been made and rejected; but I venture to think that it more nearly combines the various objects to be desired than any other plan yet offered for consideration.

In the course of the attempted legislation upon this subject three principles of selection have been successively suggested and rejected. Of these the most obvious is that proposed in Lord Hatherley's Bills of 1871, which may be termed 'direct' representation. According to this plan the court was to be constituted of a certain definite number of representatives of each of the constituent bodies, and the perpetuation of this character was to be secured by filling up all vacancies as they arose upon precisely the same principle. The disadvantages of this scheme are twofold. In the first place, it would certainly happen sometimes, and might happen often, that the very most eligible man for the position would be permanently excluded, while a succession of admittedly inferior men were appointed to the court, merely because the vacancies did not any of them take place among the members whom he was eligible to succeed: or, again (which is an aggravated form of the same objection), cases might arise where no person of sufficient eminence could be found in the body to be represented, and it would become necessary either to leave the place vacant for a time or to appoint an admittedly inferior man. In the next place, there would be very great danger that direct representation of this kind would lead to some such distribution of the attendance of the judges as above mentioned, and thus the very *raison d'être*

go as no objection whatever, and yet this is the inherent deficiency which alone it has been found impossible to remove, and which in fact has caused the downfall of the system.

I have troubled you with these preliminary considerations because they seem to me to point out the principles upon which the new Court of Appeal ought to be constructed; that is to say, it is necessary to preserve not only those characteristics to which the House of Lords owes its practical excellence, but also those which gave it its prestige and secured general acquiescence in its authority. The former quality depended mainly, if not exclusively, on the individual eminence of its members; while the latter was due partly to the unity and continuity of its decisions, but also in a great degree to the fiction which indued it with a representative character. It was felt, particularly in Scotland and Ireland, that the House constituted not an English but an Imperial Court, so that litigants from all parts of the kingdom met there as upon common ground. One great difficulty attending the institution of a new court of appeal will be to preserve this quality without impairing the efficiency of the court; for it follows from what I said that we can no longer rely for this purpose upon any fiction. It will be of no avail to interpolate the word 'Imperial' into the name of the court, unless it be impressed with a really imperial character, and it will be hopeless to expect the courts, either here* or in Ireland, to tolerate that interference from any purely or practically English court to which they have cheerfully submitted so long as the court, though for the most part composed entirely of English judges, spoke from under the mantle of the House of Lords of the United Parliament. And yet the necessity of preserving this representative character will seriously interfere with the selection and qualification of the judges of the court.

I may here premise that the institution of a satisfactory court of final appeal seems to me to presuppose a complete system of localised courts of intermediate appeal, from all of which it should be essentially distinct. For if all the cases which reach the final court are to be heard, as they ought to be, by a body essentially, and not merely nominally, one, some means must be devised for so sifting the cases that none shall reach this final court which do not, either from the amount of property at stake or the importance of the principle involved, warrant that deliberate and thorough investigation which necessarily entails considerable expenditure both of time and money. This can-

* In Scotland.

not be attained without a system of double appeal. The judges of courts of first instance must necessarily be comparatively numerous, and the tendency to divergence of decision which is inseparable from the independent action of different minds can only be efficiently connected by constant and ready access to some common superior authority. It is therefore necessary to provide everywhere courts of first appeal, readily accessible, rapid in action, and inconsiderable in expense, which will at once correct the divergencies of the courts of first instance, and, by disposing finally of all the less important cases, reduce the work of the supreme court within practicable bounds. But as these courts must *ipsâ naturâ rei* be distributed amongst the principal local centres, so as to be reasonably accessible to appellants in all parts of the empire, it follows that they ought all to be essentially distinct from the supreme court, which ought to bear precisely the same relation to them all, and which can not under any circumstances be properly susceptible of any multiplication or subdivision whatever. But to this end the judges of this court must be permanent and distinct. I for one do not believe that any system can work satisfactorily which temporarily selects some few from amongst a number of judges of equal authority, and, without altering in any respect their status or emolument, clothes them for a limited period with a superior jurisdiction, which they are to exercise with the sword of Damocles, in the shape of the necessity for frequent reappointment, hanging over their heads.

Moreover, the reluctance which the non-English portions of the empire would naturally entertain to the supremacy of an admittedly English court would surely not be lessened if the court, though nominally 'Imperial,' were really but a division of a larger court whose other divisions were occupied exclusively with English appeals.

Besides, a court of last appeal ought obviously to consist only of judges of the highest eminence: it is not sufficient that it should *contain* such judges, because in this case, more perhaps than in any other, the strength of the chain is that of its weakest link, and the presence of even one judge of admittedly inferior calibre would have a very damaging effect upon the prestige of the court. It plainly follows that to fulfil this condition the court can never be very numerous.

Further, that unity of decision of which I have spoken can only be secured by so limiting the number of the judges that the court must ordinarily consist in great measure of the same individuals. If once you have a court sufficiently numerous to sit in divisions (in other words, if its effective strength

to two full quorums), the judges will inevitably avail
s of so ready a means of lightening their work by
f labour, and concurrent sittings of different divisions
short time become the recognised rule of the court.
ry of the Court of Appeal in Chancery in England is
ustration of this. It certainly never was intended by
it to establish the Lords Justices as a court of concur-
diction sitting at the same time as, but separately, from
Chancellor; but as soon as it appeared that the
of the Act permitted this, that which was meant to be
tion was settled as the rule, and the sittings of the
, instead of being, as intended, the ordinary practice,
unusual that until lately such a sitting could only be
upon special application, for which some exceptional
st have been shown. Hence we have had practically
ct courts, however persistently they may have been
a common name. This, which was of no great conse-
the case of courts subject to a further appeal, would
that continuity of decision the obtaining of which is
chief objects of the institution of a single supreme
Appeal. This consideration fixes the *maximum* number
ges of the court at one less than two full quorums.
ne judges of this court must not only be separate and
t; they must also be distinguished from all the other
hether of first instance or intermediate appeal, by
y of position and increase of emolument. It is essen-
ract to our proposed court, if it is at all to rival the
nd authority of the House of Lords, the very first
the legal profession can produce in any part of the
But this can only be done by making this court more
than any other judicial position in the country. Not
ld the judges of this court hold office like other judges,
od behaviour; they should be given a precedence and
ary commensurate with the importance of the func-
which they are intrusted. What the precise amount
ed salary should be I do not care to inquire; but that
be such as to make an appointment to this position an
ambition to every judge in the empire, does not seem
admit of any reasonable doubt.
t this stage I arrive at a point on which I have the
e to differ from both the very learned lords who have
oduced bills into Parliament dealing with this subject.
wever, claim as an authority in my favour the Act of
the appointment of the salaried members of the Judi-
nittee. I am strongly of opinion that no one should

be appointed to a seat in this court direct from the Bar, that these appointments should be reserved exclusively judges of tried and approved experience. The position judge of a court of final appeal calls for the possession of markable judicial excellence, and this can only, in ordi cases, be obtained by considerable judicial experience. I and there a man of extraordinary capacity is recognised, while still at the Bar, as 'a great judge;' but these cases few and far between; while on the other hand even the r brilliant forensic career has more than once proved a pre to unmistakable judicial failure. What should be a suffi qualifying service as judge is a matter of mere detail, b should suggest five years as supplying a satisfactory te judicial capacity and a reasonable amount of judicial ex ence.

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Courts of the Colonies, from all of which an appeal now
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and the extent to which they are at present represented
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It only remains to consider upon what principle the requisi
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In the course of the attempted legislation upon this subje
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point an admittedly inferior man. In the next place, the
would be very great danger that direct representation of t
kind would lead to some such distribution of the attendance
the judges as above mentioned, and thus the very *raison d'é*

ırt—the submitting the law of every part of the empire
ɔntrol of one practically uniform body—would be

ıer system of representation was foreshadowed and
rried into effect by Lord Selborne's Act of 1873. It
alled 'official' representation. It consisted in placing
ırt certain *ex officio* members, holders of high judicial
: the various constituent courts, and supplement-
. by other 'ordinary judges' selected without any
to a representative character. The disadvantages of
also seem to me twofold. First of all, this scheme is, as
epresentation, as mere a fiction as the House of Lords
To *ex officio* representatives of India or any colony
sibly take any part in the business of the court, and
e from Scotland and Ireland would be seriously im-
the discharge of their ordinary functions, if their
e were more than nominal or occasional. Practically
them ever would attend, except upon some exception-
rtant appeal from their own courts, thus reproducing
ravated form one of the objections already noticed in
ng the scheme of direct representation. Secondly,
very evident objections to any plan which requires
judge to act as judge as well of first instance as of
And these objections are all the more cogent when, as
rangement under consideration, there is a plurality of
ges, so that they would be able—and called upon—
to review one another's decisions. If this led, as in
:t of Exchequer Chamber it has led, to occasional
of mutual reversal, it could not but impair the autho-
ıe court, and would besides run considerable risk of
g the law. A judge of final appeal should not, I think,
mind distracted or his time occupied with any ordinary
outine, and particularly he should not be subject to
deliberate decisions, in whatever capacity pronounced,
to reversal or review.

third principle of representation is that proposed in the
ancellor's Bill of last session, which may be described
al' representation. It consists merely in extending to
bers of all the bodies proposed to be represented equal
eligibility to the court, and leaving it to the Executive
nent for the time being to select on their own respon-
he fittest men for the vacancies as they arise. This
which seems at first more plausible than the others, is
less, like them, open to a twofold objection. First,
er of selection would sometimes be, and would oftener

be believed to be, unfairly exercised. Where such a selection has to be made from a tolerably homogeneous body, such as the Bench or Bar of any one of the constituent countries, there are pretty sure to be such means of comparison amongst the possible appointees as, on the one hand, to render any very flagrant abuse of the power of selection impracticable, and on the other, to silence any unfair criticism of a really judicious appointment. But when the selection is made from among the members of a number of distinct bodies possessing no common standard, no such means of comparison exist; and, on the one hand, much greater opportunity is afforded for the indulgence of jobbery or favouritism, while on the other it is more difficult to defend from specious misrepresentation even the most unexceptionable exercise of the power. Secondly (and this objection seems to me very important), this system, however theoretically perfect, would in practice inevitably enure to the benefit of the Bench and Bar of England at the expense of all the others. Not only are these more numerous than any of the other 'constituent courts,' not only do they from their central position occupy a more prominent place in the public eye, but they are also much better known to those upon whom the duty of selection would unavoidably devolve, and they have much better opportunities of making their voices heard where such audience is of most importance. For, no matter to whom may be intrusted the duty of formally appointing the judges of this court, the real power of determining the selection will in all ordinary cases lie with the Lord Chancellor for the time being, and he will naturally be more cognizant of the merits and more alive to the claims of those amongst whom he has lived and worked, and with whom he is familiar, than of those whose qualifications, however high, he has had to learn from the voice of fame or the testimony of others.

> Segnius irritant animos demissa per aurem,
> Quam quæ sunt oculis subjecta fidelibus.

Hence an unrestricted power of Government selection, however guardedly it may be exercised at first, would inevitably gravitate towards the production of an exclusively English court. I am aware that a very high authority, holding a judicial office of great importance in Ireland, has given it as his opinion that this is a desirable result; but in this opinion his lordship, as I believe, stands alone.

The plan which I have the temerity to propose consists of a very simple combination of the suggestions of Lord Cairns and Lord Hatherley, which seems to me, while not open to all the

ıs urged against either of them, to combine, in part at e advantages of both.

ıe first place, it is obvious that in any possible scheme l Chancellor for the time being must be one of the ı and president of the court. This leaves eight judges ler, and a very small restriction upon the discretionary f selection proposed by Lord Cairns would seem suffi- obviate the serious danger shown to arise from his thout running any practical risk of really hampering ɔn of the Crown.

ɔpose that the Crown should ordinarily be entitled to t discretion the judges of the supreme court from ; all the judges qualified as before mentioned, subject, , to this restriction: that at no time should there be less e of such judges (exclusive of the Lord Chancellor) rom each of the constituent bodies, the Crown being to appoint from any one of such bodies at pleasure any of these judges from one up to five. It is scarcely ıble that, under these circumstances, it should ever be ɜ either to pass over an exceptionally fit man for want ancy or to appoint an obviously unfit man to fulfil the l condition, and thus the representative character of the ıuld be preserved without any injury to the calibre of its ɜ.

n deeply sensible that this paper is rather a series of ial hints than a satisfactory examination of the question, object has been rather to elicit, if possible, the due dis- of a subject of immense importance before it is too late ; the action of the Legislature, than to pretend to have ɔre than make a somewhat crude and imperfect attempt ɔlution of the problem. To each of my hearers I would y say

Si quid novisti rectius istis,
Candidus imperti;

ɣ dare to add—

Si non, his utere mecum.

Assimilation of the Laws of England and Scotland. By ʃOHN M'LAREN, Advocate, Sheriff of Chancery.

ınnecessary that I should demonstrate the disadvantages result from the existing diversity of the laws of the United ɔm. The real question is, whether the advantages ng from identity of laws are such as to outweigh the

inconveniences which follow from sweeping alterations of the legal institutions of the country. I shall endeavour to estimate the value of the element of uniformity in relation to some of the more important subjects with which jurisprudence is concerned. It is unnecessary also to speculate on the causes of the diversity of laws with which we are familiar in the United Kingdom and elsewhere. Montesquieu and the older jurists found an explanation of this diversity in the doctrine of the relativity of laws to the circumstances of climate, race, and religion. The jurists of our times, with a deeper insight, have sought to identify the variation of laws and social institutions with the known stages of national development, and in the theory of evolution they conceive they have found the secret of the life of a nation. That improved institutions are the accompaniment of an amelioration of social conditions is clear enough, though it would be premature to affirm the existence of any invariable order of development with respect to changes which have taken place within historic times.

When to those general causes of variation we have added the accidental elements of individual and national peculiarity it is not surprising that the laws of England and Scotland should present numerous points of difference. Although geographically united, the Scotch and English nations have passed by very different gradations into the present social and industrial stage of history, in which the assimilation of their laws has become a practical question. Two general causes of difference in the laws of England and Scotland may be distinguished —differences in social institutions and differences of judicial opinion, the former due to natural causes, the latter to accident. The divergence of laws which is attributable to peculiarities in the institutions of the two countries is fortunately confined to a part of our jurisprudence in which it is productive of little inconvenience—I refer to the laws relating to real or immoveable property, and its transmission by conveyance, settlement, and succession. Scotland retained the feudal or aristocratic system of land tenure, because the institutions of the country were aristocratic at the time when the feudal usages were developed into a system. England rejected the feudal tenure, along with the system of government by great barons, at the time when the Commons asserted a predominant influence in the Government. In Scotland traces of the feudal system survived its extinction in the shape of a complicated and artificial system of conveyancing, which we are only beginning to get rid of. In England the simplicity of the freehold tenure was lost sight of in practice, and it became disfigured with strange excrescences

Since the abolition of fines and recoveries, releases and ejectments, and the introduction of direct, or as we should say dispositive, forms of conveyance, the essential principles of the law of property of the two countries are not very different, and this, with the extension of the Scotch system of Registration of Titles to England, is probably a sufficient approximation for any useful purpose in reference to the laws affecting real estate.

I pass to the other cause of diversity of laws to which allusion has been made, and the effects of which are most apparent in the department of mercantile law, including in this expression the subject of personal contracts. Here the great disturbing element has been the diversity of opinion which necessarily arises when the same questions are submitted to differently constituted courts, whose decisions are not subjected, except in a few cases of great importance, to the review of a central court of appeal. From this cause have arisen numerous minute differences affecting the laws of England and Scotland—differences which are not seldom of the nature of exceptions to those more general rules which the courts of both countries recognise, often affecting the forms of transactions rather than their substance. The great principles of the law of contracts grow out of the contracts themselves, and are identical in all civilised countries. They do not depend on systems or on legislation, and it is no more in the power of the Legislature to alter them than it is in the power of the mechanician to alter the laws of motion, or of the metaphysician to alter the laws of thought. But for convenience, and with a view to systematic treatment of a subject, jurists have invented theories of law to which the known rules of rights and of obligations are referred, and the theories of jurists are sometimes productive of consequences not foreseen by their authors. A theory once accepted by the judges as a true explanation of known cases becomes a part of the law, and must be carried out to its legitimate consequences, whatever these may be. The rapid development of jurisprudence in modern times has tended to multiply the points of difference between the laws of countries such as England and Scotland notwithstanding the efforts which are made by the judges to prevent further divergence. Every fresh point of difference becomes the *nucleus* of others, and an error once committed is propagated in ever-widening circles. When the body of British law is reduced to system, and those portions which are peculiar to the different divisions of the empire, and which will not amalgamate, are separated from those which are common to the United Kingdom, the tendency to further divergence might

be counteracted by enacting that the decisions of courts of co-ordinate jurisdiction should be reciprocally binding.

The last source of the diversity of laws is the statutory amendment of the law. Acts of Parliament promoted by English members usually end with a clause warning us that 'this Act shall not extend to Scotland.' In Scotch Acts of Parliament this precaution is unnecessary, because they are generally written in a language which no Englishman can understand. In Government Bills clauses are sometimes inserted which in England are supposed to be Scotch, and in Scotland are thought to be possibly Irish, but which are clearly not English, and we have usually to bring an action and carry it to the House of Lords to find out whether the Act was intended to apply to Scotland or not. It is, I think, almost self-evident that new legislation on matters of general interest should be made to extend to the United Kingdom; and yet, within my recollection, many Acts have been passed for England or Scotland alone in relation to such matters as the law of husband and wife, the powers of trustees, evidence, and even the laws creating new crimes and new modes of punishment. In such cases, the circumstances and wants of the two countries being identical, it seems clear that we ought either not to legislate at all, or to legislate for the benefit of the kingdom at large.

These general observations are necessary to make intelligible what I am now to state as to the mode of assimilating the laws of the two countries, and the limits within which this assimilation should be confined. With respect to the law of real property, my opinion is that complete assimilation is neither necessary nor practicable. It could not be accomplished *per saltum*, except by arbitrary and improper interference with titles. The immediate effect of any such inteference would be to place all titles on the same footing as regards security. This cannot be done without converting bad or doubtful titles into good ones; and to give a man a good title to an estate by Act of Parliament is just another name for depriving some other man, without compensation, of a claim affecting the estate. Besides, nothing is gained by assimilation in the laws of real property. In such cases there is no uncertainty as to the law to be applied, and no possibility of a conflict of jurisdiction. The Scotch estate cannot be carried to England and thrown into Chancery. If an Englishman purchases it or inherits it, he is not put to any disadvantage by his ignorance of Scotch conveyancing; for conveyancing is always a technical art, and the man who deals in land, whether he be a native or a foreigner, must employ a conveyancer to carry

through the transaction. These remarks are not intended to discountenance improvements in the laws affecting real property. On the contrary, I would advocate their simplification in both countries to the utmost extent that is consistent with security, and the further the process of simplification is carried, by so much the nearer the two systems will be to each other. With regard to two great departments of municipal jurisprudence, mercantile law and succession law, I think that the complete assimilation or fusion of the laws of the United Kingdom is perfectly practicable. The desired object can only be effected by legislation, and by legislation of a kind which may be described as partial codification. The only obstacle to codification is the difficulty of finding jurists able and willing to undertake the duty of forming a code of municipal laws, and a Parliament willing to delegate its authority to this limited extent. The work can only be entrusted to men of the first rank at the Bench or Bar. In other countries the difficulty has not been insuperable. I am not disposed to underrate the difficulties of the task; but a great nation ought not to regard difficulties. The importance of the object justifies a large expenditure and demands much time.

Looking to the magnitude and complexity of our legal system, the advocates of codification, if they are to make progress, must in the meantime confine their efforts to some one considerable branch of jurisprudence. The two subjects which suggest themselves to me as fitting subjects of codification are, as I have said, (1) Mercantile Law, and (2) the Law of Succession and the Domestic Relations. In some respects the last-mentioned subject appears to be the least encumbered with difficulties. The differences between the laws of the two countries are rather formal than substantial. The subject is one with which only professional lawyers are conversant; hence the chances are greater that their conclusions would be accepted by the Legislature without discussion. Moreover, the codification of this branch of the law would involve less disturbance of existing legal relations than is involved in legislation affecting trade and commerce. There is, however, a grave objection to the codification of this branch of the law under present circumstances. A large section of the public look with disfavour on the distinctions between moveable and immoveable property which run through the whole of our law of Succession, and amendments of a more or less radical character are probably not far distant. The instability of these laws is, I conceive, an obstacle to their codification. Public opinion has set in strongly against entails. Until such

questions as these are settled by Parliament in conformity with what is ultimately ascertained to be the wish of the people, it would be useless to codify these or cognate subjects. A code ought not to embrace laws that are transitory or experimental. It ought to be the expression of the mature and settled convictions of the nation, and to incorporate only those laws which regulate the actions of the people in the ordinary relations of life, excluding those on which parties are divided in opinion as well as those which confer privileges or regulate private interests.

The laws regulating contracts are the most universal in their operation, and for this reason they are probably the most fitted to undergo legislative assimilation through the instrumentality of a code. The mercantile laws of England and Scotland do not really differ so much as is commonly supposed. The friction of two centuries of commercial intercourse has rubbed off many of their sharp angles, and it were well if their remaining inequalities were removed by a speedier process. Their differences are more technical than substantial, and I venture to say that those who are interested in removing them care little in which way the outstanding points are settled, if only the laws of the two countries are made identical. But the question is not one of mere convenience with reference to international transactions. To those who look upon a code as the ultimate form which the laws and legislation of civilised states are destined to assume, the expediency of codifying the mercantile laws of the United Kingdom is a question full of interest. A more fruitful field for the operation of the legislator never existed. In its great principles this department of the law has long since attained maturity. To a great extent this is true, even of the application of these principles to special cases. The question is, therefore, not one of amending the law, but of defining it, and giving it a uniform application throughout the United Kingdom.

It would be unfortunate that our judge-made laws, the result of careful elaboration during centuries of national life, should remain in their present fragmentary state, dispersed through hundreds of volumes of law reports, a mystery to all but professional lawyers; known indeed even to them very imperfectly, and mainly through the medium of unauthorized treatises compiled by men who have devoted themselves to the study of some special subject in its original sources. Such knowledge of even one great department of legal science as can be obtained by the exhaustive study of the cases bearing upon it is the labour of a lifetime; no lawyer, be his attainments

and experience what they may, can pretend to more than a general acquaintance with the law as a whole, combined, it may be, with a more intimate knowledge of one or two topics which taste or the exigencies of practice have induced him to cultivate. Now, it is a great point gained if the acquisition of this general knowledge of the laws of the country can be facilitated by incorporating what is known and established in a code. One obvious advantage is, that this kind of knowledge is placed within the reach of every educated man. Another advantage is, that the practising lawyer is released from the uncertainty which attaches to all legal propositions, even to those which are generally accepted, and is left free to expend his energies in the prosecution of those more recondite inquiries which make the study of law an intellectual profession. I am far from thinking that it is the function of a code to repress juridical speculation by substituting a system of empirical rules for the exercise of the reasoning powers in the resolution of cases. The principles and governing rules of civil right are of necessity determined by the language of the code itself, as they are determined under the present system, though with less precision and certainty, by the text-books and the traditions of the Courts. But the application of these principles to the transactions of life must continue to furnish an inexhaustible supply of legal problems in which future generations of lawyers will find scope for the display of erudition and the exercise of forensic talent.

I by no means contemplate as a proper or legitmate consequence of codification that reporting should be suppressed, or that the judges should be precluded in applying the code from considering how the same enactment has been construed or applied by other judges. On the contrary, I hold that uniformity in the administration of justice can only be attained by having regard to precedent. In no other way can the exposition of the law be so effectively protected against partiality and caprice as it is under the operation of the time-honoured rule, that a case once adjudged by a superior court shall be a precedent for the decision of all similar cases. In the meantime, a great deal of uncertainty prevails as to the extent to which decisions of the English courts are binding upon the courts of Scotland. Under a uniform code this element of uncertainty would disappear. The decision of any superior court would be equally authoritative in England and Scotland, and in case of conflict the opinion of the House of Lords or other Supreme Court of Appeal would be decisive. As a sequel to the system of

partial codification which I have sought to illustrate, I should also contemplate the publication of an authorised abridgment of the whole body of law reports, in which all that was either obsolete or settled by the terms of the code should be omitted. For matters not embraced in the code the reports would still be referred to, but I think they might without detriment be reduced to one-tenth of their present dimensions. This appears to me to be a more feasible proposition than that of digesting the decisions in systematic treatises in the manner at one time contemplated by the English Law Commissioners. I do not think that a digest in the nature of a legal treatise, with references to cases, would be so well done by the State as it is at present under the system of private authorship. The same objection does not apply to an authorised selection of the law reports. These reports are at present authoritative. No great harm could result even if some really useful cases were omitted from the authorised abridgment; their omission would not introduce any new element into the law; it would at most only deprive some rule of its existing support, and leave the point open for discussion. The expurgation of the mass of useless material would be an incalculable boon to the profession, and the work, though difficult, is really not beyond the compass of professional industry and skill.

Suggestions with regard to the Summary Jurisdiction of Magistrates in Scotland. By JOHN NAISMITH, Member of the Faculty of Procurators, Glasgow.

PERHAPS the most useful and important part of our legislation is that which occasions the least discussion and controversy in and out of Parliament; and the best object to which the attention of this Association can be directed is the suggestion of evils which can be remedied by measures of this class. Prior to the passing of the Act authorising the use of shorthand writing in taking evidence in the Court of Session, the tediousness of litigation in that court was the subject of universal complaint. On that ground alone it was perhaps the most unpopular court in Britain. In this city at least it was universally avoided, and the local Sheriff Courts were universally preferred. But by a short Act passed a few years ago this state of matters was reversed, the use of shorthand writing authorised, and the court recovered its popularity in consequence of the great improvement in the manner of recording the evidence, both as regards expedition and accuracy. Not-

nd experience what they may, can pretend to more than a general acquaintance with the law as a whole, combined, it may be, with a more intimate knowledge of one or two topics which taste or the exigencies of practice have induced him to cultivate. Now, it is a great point gained if the acquisition of this general knowledge of the laws of the country can be facilitated by incorporating what is known and established in a code. One obvious advantage is, that this kind of knowledge is placed within the reach of every educated man. Another advantage is, that the practising lawyer is released from the uncertainty which attaches to all legal propositions, even to those which are generally accepted, and is left free to expend his energies in the prosecution of those more recondite inquiries which make the study of law an intellectual profession. I am far from thinking that it is the function of a code to repress juridical speculation by substituting a system of empirical rules for the exercise of the reasoning powers in the resolution of cases. The principles and governing rules of civil right are of necessity determined by the language of the code itself, as they are determined under the present system, though with less precision and certainty, by the text-books and the traditions of the Courts. But the application of these principles to the transactions of life must continue to furnish an inexhaustible supply of legal problems in which future generations of lawyers will find scope for the display of erudition and the exercise of forensic talent.

I by no means contemplate as a proper or legitmate consequence of codification that reporting should be suppressed, or that the judges should be precluded in applying the code from considering how the same enactment has been construed or applied by other judges. On the contrary, I hold that uniformity in the administration of justice can only be attained by having regard to precedent. In no other way can the exposition of the law be so effectively protected against partiality and caprice as it is under the operation of the time-honoured rule, that a case once adjudged by a superior court shall be a precedent for the decision of all similar cases. In the meantime, a great deal of uncertainty prevails as to the extent to which decisions of the English courts are binding upon the courts of Scotland. Under a uniform code this element of uncertainty would disappear. The decision of any superior court would be equally authoritative in England and Scotland, and in case of conflict the opinion of the House of Lords or other Supreme Court of Appeal would be decisive. As a sequel to the system of

loitering about at meal times, and that it was necessary that the practice should be put a stop to.

To the errors in law occasioned by this arbitrary and paternal manner of administering justice must be added those arising from ignorance. It is quite true that in the general case magistrates are assisted by their clerks or other professional assessors; but the public have no guarantee of the competency of these advisers, who are too often appointed to their offices on merely political grounds. In the event of the occurrence of a vacancy in the office of Clerk of the Peace, it is notorious that the solicitor who has been acting as the chief political or electioneering agent for the party in power for the time is considered to have a claim to the office if he should choose to ask or to accept it, no matter how inexperienced in and ignorant of judicial procedure he may be. The magistrate also is under no obligation to conform himself to the advice or directions in law which he receives from his assessor, and the more ignorant he is, the more likely he is to be wayward and to proceed entirely on his own views.

Another source of error arises from the necessarily great, and sometimes too great, influence possessed by the public prosecutor over the mind of the bench. No one can be more satisfied than I am of the great benefit arising from our system of public prosecution. The good effect of this system is not counterbalanced by any corresponding disadvantages in those courts which are presided over by professional and permanent judges, but where the bench is composed of justices of the peace who act only occasionally, or by city or burgh magistrates who hold office temporarily, there are, it cannot be denied, occasional mischievous results. The duty of the procurator fiscal is to detect crime and to procure the punishment of the criminal. This is the object of his life, and it is natural that it should be keenly, sometimes too keenly, pursued. When he is fairly embarked in a criminal prosecution the public prosecutor's object is to obtain a conviction, as the guilt of the accused is, as far as he is concerned, a foregone conclusion. This tendency is kept in check by a professional judge, but a temporary and non-professional judge is apt to defer too much to the views and opinions of the public prosecutor. He knows him to be a fair, honourable, able, and experienced man, much more experienced than himself, and not making sufficient allowance for his necessary bias, and knowing that he would not prosecute a case that he did not believe to be just, he allows himself to be unduly swayed by his views and opinions.

Another and most important evil is the want of confidence

in the administration of justice occasioned by the varying decisions of justices of the peace and citizen magistrates. What is law in one county is not law in another. What is law in the city is not law in the county. What is law to-day is not law a month hence when another magistrate is on the bench.

Now it may be said that, admitting that these are evils, they are necessary evils, and much counterbalanced by the speed and cheapness with which justice is administered—that on the whole there is a fair average of justice, and that after all, if some cases are not decided in accordance with law, the interests involved are of no very great consequence.

But is this so? Is it of little consequence to a poor man to be fined or imprisoned for an offence which in the eye of the law, and on a sound construction of the statute on which he is charged, is no offence at all? A man may in this way be ruined in character and prospects in life who really has done nothing legally and possibly nothing morally wrong.

It may be and often is the case that very important pecuniary interests are at stake in such questions. Take the case of a prosecution for penalties for creating a nuisance in the process of manufacture under our Local Police Act. The nominal question is whether a petty fine of two or five pounds has been incurred, but the real question is whether a particular manufacture can be carried on within our city. If a conviction be obtained and a fine is imposed the direct result is that the fine must be paid; the indirect is, that the manufacture must, at enormous, perhaps ruinous, expense, be removed to some other locality; and yet, after all, the sentence may be absurd and altogether unwarranted by the statute.

We have seen that very serious evils may and must result from the exercise of summary jurisdiction without appeal. The remedy which I would suggest to secure justice and uniformity of decision is that, when required to do so, the inferior judge or magistrate should be bound, or at least entitled, to state in a case for the opinion of the Court of Session the facts which have been proved before him and on which his judgment is based, that the Court may decide (1) what is the law, and (2) whether or not the law has been correctly applied to the proved facts.

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On Treaties relative to the Execution of International Judgments. By J. DE VRIES.

THE subject which I am about to submit to your consideration I have felt to be one of great interest and importance in this progressive age, more especially to this most influential country in its intercourse with the nations of the Continent.

The question at issue which claims your attention is as follows:—Has experience shown the want of treaties facilitating the execution of judgments decreed in foreign countries to be executed in this, and *vice versâ*, to be a serious void in our international jurisprudence? Political conventions of this nature were entered into in France so early as 1760, when that country and Sardinia ratified a treaty for the mutual protection of the rights of their citizens. This was succeeded by a treaty between France and Switzerland, which, with that between the former country and Sardinia, was renewed uninterruptedly from time to time, with certain modifications. It seems to me that matters as they now stand are most unsatisfactory to all parties. For instance, by the French law aliens have no right of action against each other in the French tribunals, except in commercial matters which have originated or are to be fulfilled within their jurisdiction. Hence it follows that parties not being French subjects wishing to avoid the fulfilment of their obligations contracted in this country cannot be proceeded against in France. The only remedy is to bring an action against the absconding party in an English court, and have the judgment executed by order of the French tribunals; but in absence of treaties such as exist between France and Italy, and also between France and Switzerland, the operation becomes tedious and uncertain, more especially when foreign judgments are required to be executed in this country (see Schilsby *v.* Westenholz, Law Reports; 6 Queen's Bench 155). It should also be observed that the present mode of serving writs out of the jurisdiction is no longer in keeping with the present exigencies of the age; and according to my idea the affidavit of service to be sworn before a British consul can be very well dispensed with. For let us suppose that the defendant resides far in the interior, at an inconvenient distance from a British consul, is it reasonable for the law to require such a sacrifice of time and money for the sake of a formality wholly unnecessary? I have no hesitation in asserting that article 69, paragraph 9, of the French Code of Civil Procedure, which is similar to article 142 of the Italian Code of

Civil Procedure (followed in fact by almost all the continental nations), is more in accordance with common sense. The articles alluded to provide that where the defendant resides out of the country the citation is delivered by the judicial process-server to the Procurator-General, who in turn hands it to the Minister of Foreign Affairs, to be forwarded to the cousular officer residing near the defendant for service. It is quite clear that if the latter has a good cause of defence a reasonable opportunity is afforded him to bring forward such proofs to contest the validity of the claim; but if he chose to treat the matter with indifference and take no notice of the proceedings, then it certainly must be presumed that there is no defence to the action, and consequently the plaintiff to be entitled to judgment.

The next question to consider is—Why a judgment obtained in a recognised tribunal according to the laws of the country where it has been decreed should not receive the same consideration as one given by the courts of the country of the defendant's residence. I have alluded to this topic for the purpose of showing that even international treaties, without an amendment of municipal laws so as to bring the laws of the contracting nations in harmony with one another, would be futile. I think it very essential to refer to the Code of Civil Procedure of Italy promulgated June 25, 1865, on account of the special provision contained in title 12, respecting the procedure for enforcing foreign judgments in that kingdom. It would be no disparagement to any country to adopt the same dispositions of law for their justice, facility, and convenience; but in order to make a foreign judgment available in the Italian courts the plaintiff must obtain the permission of the King's Procurator or the Procurator-General of the district where a foreign citation is to be served. This permission is always given after perusal, and moreover, if the said citation is remitted through the intervention of political agency, then the same is handed to the process-server by the said Procurator-General direct for service on the defendant.

Executions of foreign judgments are granted by the courts of appeal of the districts within whose jurisdiction the executions are to be levied, subject to the following conditions, viz.:—

1. Whether the judgment has been given by the judicial authority having proper jurisdiction.

2. That judgment has been pronounced on the parties having been duly summoned.

3. That the parties have been legally represented, or suffered judgment to go in default.

4. That the judgment contains dispositions not contrary to public order or internal public law.

Notwithstanding, however, the provisions just cited, I may observe that they can be made subordinate to stipulations by international treaty.

The next question I submit to your consideration is—Whether good cause can be shown against the views I have propounded? There seems to be no argument capable of upholding a negative doctrine. The advantage of treaties approaches the assimilation of the laws of one country to another, and may in the end stimulate the adoption of an universal commercial code. The following rule has been laid down by the Court of Cassation in France on the 23rd of February, 1864, to the following effect:—*C'est par la loi du lieu où elle a été formée qu' une convention intervenue en pays étranger entre Français et étranger est régie, quant à sa forme, à ses conditions fondamentales et à son mode de preuve.* Such a doctrine is certainly an incentive to have confidence in the justice of the jurisprudence of the country. The same principle was adopted by the Italian Legislature in 1865 (see articles 9 and 10 of the preliminary of the *Codice Civile*). In support of my views as to the efficacy of international treaties it may not be out of place to refer to 24 and 25 Vic., cap. 11. This is an Act of Parliament for the express purpose of enabling Her Majesty to enter into conventions with any foreign country for the ascertainment of the law of such foreign country when pleaded in actions depending in this country, and reciprocally. It seems therefore that in 1861 the Legislature must have fostered the idea that treaties were necessary for the advancement of justice resting on international law.

The Assimilation of the Law of Sale in England and Scotland.

By Thomas G. Wright.

SOME progress was made by the Legislature in 1856 towards the assimilation of the laws of England and Scotland as to the contract of sale.* But there still remain several important points in which these laws differ. The English statute touched only two points—the effect of inchoate diligence, and the buyer's remedy in the event of the seller's failure to deliver. It may be suggested as worthy of considera

* 19 & 20 Vict. c. 60. An Act to Amend the Laws of Scotland affecting Trade and Commerce.

tion whether there are not some other points in which this branch of law in England might not be improved by assimilation to the law of Scotland. The provisions of the statute affecting the law of Scotland are much more numerous and important. Beginning with the relations between seller and buyer, their creditors, and others deriving right from them, while it leaves untouched the principle that the property of goods sold remains with the seller until the buyer obtains delivery, it enlarges the buyer's right to enforce delivery, not only from the seller but also in competition with his creditors, and the same right has been conferred upon a sub-purchaser, so that he also, by virtue of the title which he has acquired from the buyer, can demand delivery of the goods from the seller or his creditors—always on condition, of course, that the price has been paid. The statute in this way reduces the seller's right of property in goods sold but not delivered, in a question with a sub-purchaser, practically to the same limits as the vendor's right of lien in England. It admits, however, of the enlargement of the seller's right by legal process or special agreement; but, in by far the greater number of such transactions, these exceptional circumstances do not occur.

The law of the risk of goods sold was not touched, as, although based in the one country on the maxim 'res perit suo domino,' and in the other on the maxim 'periculum rei venditæ nondum traditæ est emptoris,' it is virtually the same in both countries. It was, therefore, not necessary to trench on the principle of Scotch law, according to which the right of property is not transferred until the goods sold have been delivered. The next matter touched by the Scotch statute was the law of warranty, and it will be admitted that in assimilating our law to that of England by taking away the warranty which was implied from the payment of a full price a substantial improvement was effected, and that the enforced attention to the terms of contracts, in this particular, when made, has done something to lessen litigation.

We come now to some points of primary importance on which both statutes are silent:—

1st. The law of the remedy available to the buyer in the case of a breach of a warranty. Nothing could be more simple than our rule. The buyer must timeously reject and return the goods. If he is not to be compelled to accept the goods because they are not such as he purchased, neither is the seller to be deprived of his control over them. If the return or rejection of the goods is warranted by the circumstances, and the buyer sustains direct loss by the seller's breach of the con-

tract, he is entitled to recover that loss from him. In England, on the other hand, there are certain cases in which the buyer's remedy is only by cross action for breach of the warranty, or by claiming an abatement of the price. In some cases he may return the goods; but in others he must retain them and make his claim for inferiority. There is obviously room for improvement here, and it is scarcely to be doubted that it would be found in bringing the law of England nearer the simple rule of the Scotch law.

But to pass on to another and more important difference between the laws of the two countries, namely:—

2nd. The law of the formation of the contract. By the common law of England, verbal contracts for the sale of goods, of whatever value, were recognised; but by the Statute 29 Charles II. cap. 3, s. 17 known as the 'Statute of Frauds,' and the subsequent Act (9 George IV. cap. 14, s. 7), known as 'Lord Tenterden's Act,' no contract for the sale of goods of the value of 10*l.* sterling or upwards is binding, unless some note or memorandum in writing of the bargain is made and signed by the parties or their duly authorised agents, or unless the buyer accept part of the goods and actually receive the same, or give something in earnest to bind the bargain or in part payment.

In Scotland a contract for the sale of moveable property is validly concluded by consent alone, and neither writing nor any act in implement of the contract is required to enable either party to enforce its implement. It is surely time to consider the expediency of continuing so fundamental a difference between the laws of the two countries as regards the formation or constitution of this important contract. It is not too much to say that in every business hour sales are made by merchants and others carrying on business in one part of the kingdom to those who are carrying on business in the other. Buyers from Scotland are making purchases in the English and Irish markets, and buyers from these countries are making purchases in Scotland daily.

Should either of the parties refuse to fulfil such a contract, then the first question to be settled is, whether the validity of the contract is to be determined by the law of the one country or the law of the other. And assuming it settled that the law of England is applicable to the case, it must next be ascertained whether the contract falls within the statute of frauds, or, in the words of an eminent judge, whether it is 'within the meaning and mischief of the statute?' Then such questions as these may have to be determined: Has there been an accep-

tance of the goods? Has a sample been taken, not as a sample merely, but as a part of the whole? Has there been a constructive acceptance? Or, has there been an actual receipt of the goods? The buyer may have been in possession in a character different from that of buyer before the purchase was made, and the question may be, Whether he has done anything after the agreement to purchase which was inconsistent with the title under which he previously held the custody of the goods.

Again, if there be a writing, questions may arise as to whether it amounts to a note or memorandum of writing in the sense of the statute; whether it is a sufficient note of the bargain made; whether it is signed by the party or by an agent, and, if so, whether the agent was duly authorised to sign. These difficulties merely indicate the amount of litigation which this statute has caused, and the very statement of them is surely sufficient to excite the inquiry, Whether there is any reason why such a state of matters should be allowed to remain? The statute has perplexed legal ingenuity long enough. It has never, so far as we know, been suggested that the law of Scotland on this point either causes inconvenience or affords opportunities for fraud. Happily we have no such array of cases on the law affecting the constitution or formation of a contract of sale as is to be found in the English reports. Those who have had experience of commercial dealings will bear out the statement that the absence of such cases cannot be accounted for by saying that merchants, when they find that their contracts are repudiated, refrain from compelling fulfilment of them because they are not in writing, or no act has been done in part fulfilment which would go to prove the making and terms of the contract itself. The fact is, that, untrammelled by statute, the ordinary modes of transacting business are found to be sufficient for proving as well as making contracts of sale.

The third and last point of difference belongs to the Law of Evidence.

In Scotland the proof of the payment of the price of goods, if sued for within the years of prescription, is in the general case limited to the writ or oath of the seller. The writing may be a receipt or an entry in the seller's books. In England the payment may be proved by the testimony of witnesses. The reason assigned for the Scotch rule is that witnesses may readily fall into error as to the amount of money paid, and also as to the consideration for which it has been paid, and it seems to be sound. There may be two reasons why the greater latitude

was allowed in England. The main or chief reason probably is, that it seems questionable whether at common law a party paying a debt is entitled to demand a receipt. But as this law has been settled by statute (16 and 17 Vict. c. 59, secs. 3 and 4), so that a creditor is now bound to grant a receipt, that reason has disappeared. Another reason probably is that a receipt, unless under seal, is not conclusive, but only *primâ facie* evidence, which may be rebutted by oral evidence. In Scotland such a document being *in re mercatoria* is, unless challenged on the ground of forgery or fraud, conclusive, and this is both safe and convenient.

Inquests into Fires, with Special Reference to the Officer by whom such Inquests should be Conducted. By PETER M'LAGAN, M.P.

THE frequency of fires, the loss of life and destruction of property resulting from them, and the terror, hardships, and inconvenience occasioned by their ravages, led people even at a very early period to adopt means for preventing and extinguishing them. The Romans, for instance, had bands of men appointed, whose principal duty was to be on the outlook for fires, and to extinguish them. About 800 years ago it was enacted in this country that all fires in houses were to be extinguished at the ringing of the curfew bell, under a penalty; and about 300 years ago bellmen were appointed in London to ring the bells at night, and call out—'Take care of your fire and candle; be charitable to the poor, and pray for the dead.' Nor as civilisation has advanced, and manufactures and commerce increased, has the number of fires been reduced, or the devastation caused by them diminished.

In the report of the Select Committee of the House of Commons, which was appointed in 1867 to inquire into the existing legislative provisions for the protection of life and property against fires in the United Kingdom, and as to the best means to be adopted for ascertaining the causes and preventing the frequency of fires, it is stated 'that the increase of fires in London of late years has been very great; for while in 1840 the number was 680, it had increased in 1866 to 1,330. The increase continued till 1870, when the number of fires was 1,946. Since then there has been a reduction, and it is to be hoped that this reduction will continue. It might be said that this increase in the number of fires was nothing more than what might have been expected from the increase in the

number of houses and in the population. But this was not the case. The proportional increase of fires was much greater than the proportional increase in the population and in the number of houses. For while the increase in the population in London from 1840 to 1866 was at the rate of 54 per cent., and in the number of houses was at the rate of 46 per cent., the increase in the number of fires was at the rate of 104 per cent. The Committee received similar reports of fires from all parts of the kingdom. Thus in Manchester in the five years from 1846–50 there were 118 fires, while from 1866 to 1870 they had increased to 276, or 130 per cent. And notwithstanding the measures that have been adopted of late years to render buildings fire-proof, and the application of science, skill, and organisation to the means for extinguishing fires, the destructiveness of modern fires is greater now than it was some centuries ago. For though about 200 years ago we had the exceptional and devastating fire of London, which destroyed houses whose annual rent was computed at 600,000*l.*, or more than 1,000,000*l.* according to the present value of money, besides furniture and other property, we are not surprised at the fearful devastation when we consider the comparatively inflammable description of the houses destroyed, and the very insufficient means for extinguishing fires, or for arresting their progress; but such destructive fires, or those approaching in destructiveness the fires of the present day, were comparatively rare. Now, however, fires destroying property to the extent of hundreds of thousands of pounds are almost of daily occurrence; and we are surprised when a fire like that in Tooley Street is reported, which destroyed 2,000,000*l.* worth of property in warehouses built for fire-proof, and when its progress was attempted to be resisted by a most efficient and well organised fire brigade, commanded by the most able and experienced leader of his time, and with greatly improved appliances for extinguishing fires, directed with great skill.

In America the magnitude and destructiveness of fires are even worse than in this country. A writer there states—'Leaving out of view the exceptional cases of Chicago and Boston, the daily record of fire embraces property estimated always by tens, often by hundreds, of thousands, not rarely by millions of dollars; we have little doubt that the tax paid to the fire-king has for the last three years exceeded the entire revenue of the United States.' It is, however, satisfactory to learn that within the last few years the percentage of serious fires in the metropolis has been materially reduced under the able superintendence of Captain Shaw; for while in 1866, 25

per cent. of the fires in London were returned as serious, in 1872 only 11 per cent. were returned as belonging to this class. The causes of fires in this country may be divided into four classes, viz., those arising, 1st, from accident; 2nd, those from the faulty construction of buildings; 3rd, those from culpable negligence; and, 4th, those from incendiarism or arson. To this I may add a sentence from the report of the Fire Protection Committee in 1867:—'It has further been given as evidence,' says the Committee, 'and admitted even by gentlemen connected with insurance companies, that the increase in the number of fires of late years is, in some measure, to be attributed to the great competition among insurance companies for business; their carelessness in taking risks, as well as in the appointment of agents; to the too ready facility with which they settle claims, some of which they believe to be fraudulent; and to a disinclination in general in the companies to prosecute.'

I need not enlarge here upon the first two causes mentioned above of those fires arising from accident and from the faulty construction of buildings, excepting only in so far as to impress upon municipal authorities the great importance of attending to the construction of buildings with the view of preventing fires. I may mention, in particular, that great care should be taken not to place the timber of the houses too near flues and fireplaces—this is a frequent cause of fires. The external construction of the houses should also be attended to, not so much from their connection with the origin of fires as with preventing the spread of them. It is well known that the extent and destructiveness of the Boston fire were due very much to the Mansard roof, which is almost always constructed of wood, covered sometimes with lead. The third and fourth causes mentioned as the origin of fires, viz., culpable carelessness and incendiarism and arson, are more immediately connected with the object of this paper.

While there is no doubt that incendiarism is a crime, and ought to be visited with severe punishment, carelessness will not be put by most people in the category of crime. But it has been justly remarked that 'carelessness, when reproved, if persisted in after the right way of proceeding has been pointed out, should be severely punished.' By an unrepealed Act of Queen Anne, a servant who was proved, from negligence or carelessness, to have caused a fire, was condemned to pay a fine of 100*l.*, or, in default, to suffer imprisonment with hard labour for eighteen months. And of late years carelessness in a pointsman on a railway, in an engineman at a coal-pit, and

generally in one workman causing injury to another, has been deemed a punishable offence. But is there any ground for suspecting that a large proportion of the fires in this country is the result of crime? We must necessarily expect the causes of a great many fires to be unknown, for the fire generally destroys the evidence of its origin. Hence the advantage of having the fire attacked at an early stage and extinguished. Captain Shaw, of the London Fire Brigade, stated, in his evidence before the Fire Protection Committee, that while the percentage of fires from unknown causes in 1833 was only 12, in 1866 it was 43½.

Now when we find that the causes of a large proportion of the fires are unknown, and that the greater number of these fires is in insured property, or when we find that by far the larger proportion of the fires takes place in insured property, while not more than one-third of the insurable property of the country is insured, we naturally suspect that the insurance of the property has had something to do with the fire, either in inducing carelessness or tempting to incendiarism. Now we have the following facts on this subject:—In London, in 1866, there were 589 fires whose causes were unknown, and of these 470, or about four-fifths, were in insured property. In Edinburgh, in 1869, there were eighty-one fires, seventy-one of which were in insured property. In Leeds, in 1870, there were seventy fires, and sixty of them in insured property. Again, Mr. Braidwood said that he could often tell beforehand when certain buildings were to be set on fire, if they were old and dilapidated, and an insurance had been recently effected on them, and plans had been got ready for rebuilding them. Other suspicious circumstances connected with fires would lead us to suppose that the insurance of the property had something to do with the fire. For instance, one witness before the Committee stated that often fires were caused by small shopkeepers who were on the verge of bankruptcy. In such cases dummies instead of real goods were found in those shops: and if the fire were discovered and extinguished in time, suspicious circumstances might be observed, such as the floor steeped in naphtha, paper in places where it should not be, and sometimes the premises would be found on fire in several places at one time. When fires occurred in the shops of those who were not prosperous, and had not a ready market for bad goods, all those goods would be sure to be burnt; but the insurance policy was always sound. There was no more ready market for unsaleable goods than a fire. Again, gangs of men hired houses, put furniture into one of them, insured the furniture, then removed

it to another house, and set fire to the first house, receiving the insurance money for the furniture which was never burnt, but was safe in the second house. The same transaction was repeated with the second and third house, and so on with other houses, the same furniture doing service all the time. Another suspicious circumstance connected with fires is the exorbitant claims made by those whose property was destroyed, and their readiness to reduce or withdraw them altogether if the insurance companies refused to pay them, and compelled them to prosecute, which of course would cause a public investigation into the origin of the fire. I have before me claims made for property destroyed by fire amounting in the aggregate to upwards of 100,000*l.*, which were settled for 33 per cent. less on the insurance companies resisting payment. Now, in all these cases, the money to be got from the insurance companies was the inducement to set fire to the premises. It is sad to think that an institution, the necessary offshoot of our civilisation, which induces forethought and creates a desire to make provision against the loss and devastation of fire, should be the unfortunate means of increasing a crime by which life and property are not only endangered but often lost and destroyed.

Having shown that a large proportion of fires is wilful or is due to incendiarism and crime, we have now to inquire what means should be adopted to check that crime. The difficulty of discovering the cause of the fire gives a confidence to the incendiary in the committing of his crime. We diminish this difficulty by increasing the facilities of extinguishing fires at their commencement. And this is what is aimed at by the fire-brigades of the present day. Every inducement is held out to policemen and others to give early notice of the fire; and every exertion is made by the fire-brigade to be soon at the head of the fire. But, in addition to these precautions, it is necessary to have an inquiry to ascertain whether the cause was accidental or intentional, and if intentional, whether the fire was the act of a monomaniac or of one wishing to defraud the insurance company, or whether it was done from malice. I have mentioned the act of a monomaniac. It is a curious fact that there are some people, generally under the age of twenty, who have a monomania for setting fire to houses. Mr. Braidwood in his treatise mentioned the case of a boy of fifteen who set fire to his father's premises seven times within a few hours, and of a young female who set fire to the furniture of a friend whom she was visiting ten or eleven times in the course of one or two days. In neither case could any possible motive

be given for their conduct. We read of similar cases every now and then in the papers.

But the great object of having an inquiry into fires is to detect and check crime; and whenever an inquiry has been instituted with this object it has been successful. In the report of the Fire Protection Committee several instances are mentioned of this. About four years ago, the Sheriff of Lanarkshire, alarmed by the frequency of fires in the county, issued instructions to the Procurator-Fiscal to make an inquiry into every fire that occurred. This had the desired effect of almost entirely putting a stop to the fires in the county. Mr. Humphreys, the Coroner of Middlesex, stated in evidence that the practice of taking inquests into fires was revived some years ago, and was attended by a considerable diminution in the number of fires. In South Wales and in Cambridgeshire a similar action on the part of the coroner and magistrates was followed by the same beneficial results. In the year 1858 there were 130 incendiary fires at Baltimore. A fire marshal was appointed in that year to investigate into all fires, with the immediate result of an annual gradual decrease in the number of fires till 1863, when there were only ten fires. So also in some of the principal towns on the continent of Europe investigations into fires are regularly conducted, and have always had the salutary effect of checking crime.

What is required for the detection of crime in fires in addition to the ordinary criminal trials is a preliminary investigation into their origin. We have a case analogous to fires in shipwrecks and injuries to ships on sea. In such cases an inspector is appointed by the Board of Trade to report upon the nature and causes of any accident or damage which any ship has sustained or caused, or is alleged to have sustained or caused. He is invested with extensive powers; for he may go on board any ship and may inspect the same, or any part of it, or of the machinery, boats, or equipments, &c. He may enter and inspect any premises, the entry or inspection of which appears to him to be necessary for the purpose of the reports. He may require the attendance of all such persons as he thinks fit to call before him and examine for such purpose. Whenever a ship is lost, abandoned, or materially damaged at or near the coast of the United Kingdom, it shall be lawful for the inspecting officer of the coastguard or the principal officer of customs residing near the place where such loss, abandonment, damage, or casualty occurred, or for any other person appointed by the Board of Trade, to make inquiry respecting such loss, abandonment, damage, or casualty; and he shall have all the

powers given to inspectors appointed by the Board of Trade under the Merchant Shipping Act. If it appears to such officer or other person appointed as above, either upon or without such preliminary inquiry, that a formal investigation is requisite or expedient, or if the Board of Trade so directs, he shall apply to any two justices, or to a stipendiary magistrate, who shall appear to try the case as if the same were a proceeding relating to an offence or cause of complaint upon which they or he have the power to make a summary conviction or order. And they or he shall report the same to the Board of Trade, accompanying the report with abstracts from the evidence. In cases where nautical skill and knowledge are required, the Board of Trade shall have the power, either at the request of the justices or of the magistrate, to appoint some one of nautical skill and knowledge to act as assessor to such justices or magistrate, who shall, at the conclusion, either signify his approval of the report by signing the same, or, if he dissents, shall signify his dissent and his reasons to the Board of Trade. The Board of Trade may remit to the Lord Advocate in Scotland to prosecute the cases occurring on the coast of Scotland in such manner as he may direct. The justices or stipendiary magistrate who may have heard and tried the case may make such order with respect to the costs of such investigation as they or he may deem just. And the Board of Trade may pay the expenses of the investigation or the remuneration of the assessor.

It will be observed here that there are two stages in the inquiry. First, the inspecting officer of the coastguard, or the principal officer of customs, or the inspector appointed by the Board of Trade, investigates the case, to ascertain as to whether the damage to, or loss of, the ship was caused by an ordinary accident, or was the result of foul play or crime, or was of such a serious character as to demand a formal inquiry. Secondly, if he should have reason to suspect that it was the result of foul play or crime, or should believe it to be of such an extraordinary or serious character as to require a formal investigation, he hands the case over to the justices or a stipendiary magistrate, who, with or without the assistance of an assessor, conducts the second inquiry. In the first inquiry crime is not discovered, but only suspected. In the second inquiry the damage or loss may or may not be discovered to be the result of crime; and if crime should be proved, the guilty persons may or may not be known, and it will be for the authorities to have further investigation. A similar course of procedure should be adopted in the case of fires. Some have even

recommended the Board of Trade as the authority to be entrusted with the inquiry. But there are two objections to this, the first of which is that the Board of Trade is already overburdened with work; and the second is the necessity for having the investigation at the site of the fire, and immediately after it has occurred, without waiting for instructions from the Board of Trade.

Others have recommended that a special officer should be appointed, having similar powers to those of the fire marshals in America, who can send for persons and papers, and are empowered to take testimony on oath, and who are occasionally clothed with magisterial powers. But I do not think that there is any necessity for the creation of new officers, as we have already officers who can combine with their other duties that of inquiring into the origin of fires. In England and Ireland we have the coroner, and in Scotland the procurator-fiscal. The coroners always inquire into the cause of fires when any death occurs at them, and some coroners consider it a part of their duty to inquire into the cause of every fire in their districts. Serjeant Payne, Coroner for London and Southwark, in evidence before the Committee on the office of coroner, stated that he was empowered to hold inquisitions into fires by the common law, which authority will be found laid down, not only in the old law-books, but in some statutes. Attempts have been made by the justices to restrict the power of the coroner, which have been resisted by them. The coroners insist that it should be left to them to take the initiative in all investigations into sudden deaths and fires. In Scotland the inquests into fires are conducted by the procurators-fiscal by instructions from the Lord Advocate. There is an impression in England that there are no inquests into sudden deaths in Scotland similar to those in England. It is true that there was at one time no officer in Scotland who performed the duties similar to those of the coroner. But of late years the procurators-fiscal have been charged by the Lord Advocate with the duty of investigating all cases of sudden death within his district in which there is any suspicion or reasonable ground for supposing that the death may have been occasioned by violence or by culpability of any kind; also, all cases of death from accident within his district, and all cases of sudden death from other than known natural causes; also, all cases of suicide, or cases in which persons are found dead and are not known to have died from natural causes. The procurator-fiscal is supposed to do all these duties under the sheriff's warrant. The sheriff is probably in the position of the coroner, but the

procurator-fiscal really does the work. Recent instructions have also been issued from the Crown Office for procurators-fiscal to investigate all cases of fire occurring within their district wherever a fire has taken place under circumstances of suspicion, or wherever extensive destruction of property has taken place or life has been endangered by fire. The great difference between an inquest by the coroner and that of the procurator-fiscal is, that the former is conducted in public before a jury, and the latter is conducted in secret without a jury. Both plans have their advantages and their advocates. While the conducting of these inquiries in public might be the means of bringing forward witnesses who could speak to the case, the conducting of them in secret is more useful in securing the ends of justice. Publicity tends to facilitate the escape of a guilty party more than his detection. The precognitions taken before the procurator-fiscal are not on oath, and the taking of them in secret is a protection to innocent parties, and prevents rumours from getting abroad about them. The precognitions are forwarded to Crown Counsel, who have the future disposal of the case. If on the face of the precognition culpability appears, the party is apprehended and proceeded against, as if he had been originally charged with the crime. If it is plain that no culpability attaches to any one, the case is allowed to drop.

There is a growing feeling in England against coroners as at present appointed, and a strong feeling in favour of the appointment of public prosecutors. A committee of the House of Commons has recommended such an appointment, and bills have been introduced with this object. And the Judicature Commission has reported in favour of a similar appointment. When the bill for the appointment of public prosecutors was under discussion in 1871, the Attorney-General stated that England, so far as he knew, was the only civilized country in the world in which prosecutions were not considered to be the office of the Executive Government—in other words, in which a public prosecutor was not appointed. The Lord Chief Justice said it very often happened that cases were brought to trial which were only imperfectly got up, and that they failed for want of some superintending authority to put the evidence together and see that it was complete; and that there were cases of collusion in which, by arrangement between the parties, the cases were not taken before the grand juries or the witnesses absented themselves, or did not give the evidence which they ought to give, so that guilty parties got off. Mr. Russell Gurney, who had charge of the Bill, said that 'he set out

with the principle that the detection of guilt and the punishment of offenders were the duty of the State, and that independently of the private party who might have been injured. The State suffered when guilt remained undetected and when offenders remained unpunished, and the State suffered even more when under the forms of law, and by means of the forms of law, the innocent were unduly harassed and their lives were put in peril. In Scotland, where was a public prosecutor, for every eleven persons tried one was acquitted, while in England, where there was no public prosecutor, the proportion was one in five.'

My reason for referring at such length to the appointment of a public prosecutor is that several members opposed the Bill for inquests into fires because it was proposed to conduct the inquests by coroners in England and Ireland; but they signified their approval of the principle, and their intention to support it if the inquiry were entrusted to a public prosecutor. The Home Secretary stated last session that 'the whole question was so much mixed up with the appointment of a public prosecutor that, until the Judicature Commission had reported on that point, this—viz., the inquiry into fires and other similar questions—could not be considered by the Government.' The Judicature Commission having now reported on the subject, it is to be hoped that the Government will take it up. It only remains for me to offer one or two suggestions as to the conducting of these inquiries generally in the United Kingdom and particularly in Scotland. It has been proposed by some that the insurance companies should be at the expense of conducting these inquiries, because they more than any other party would be benefited by them. But those who make this proposal overlook the fact that not more than one-third of the insurable property in the kingdom is insured, and that the fires may originate in premises not insured. Besides, it is wrong in principle and in policy to make a commercial company or private individual pay for the detection of crime. I cordially concur in the sentiment expressed by Mr. Russell Gurney, which I shall repeat—'The detection of guilt and the punishment of offenders were the duty of the State, and that independently of the private party who might have been injured.' As regards the investigation into the causes of fires by the procurator-fiscal in Scotland, I would propose that it should be conducted publicly in part. He should investigate into all cases of fire occurring in his district, and if he has reason to suspect that the fire has been unlawfully caused, or if there has been extensive destruction of property, or life has been

endangered by fire, he should conduct the investigation in public, and report as he does now to the Lord Advocate before committing any one. The object of having these investigations public is to deter others from committing similar offences. Some men who would run the risk of being detected for setting fire to their premises for the insurance money would hesitate to do so if they were to be exposed to the annoyance and suspicion of a public investigation.

MISCELLANEOUS.

Mr. J. M. LUDLOW, Barrister-at-Law (late Secretary to the Friendly Societies Commission), read a paper on 'Companies and Societies, with special reference to the Friendly Societies' Bill of the last Session.'[1] Fifty years ago, he said, with the exception of mining companies on the cost-book principle, confined to Cornwall, friendly societies, and savings banks, the law recognised only one form of association, unless by special authority from the Crown or from Parliament—that of private partnership. Defects of judicial procedure rendered the use of this form impracticable where there were many partners; any attempt to modify it by the creation of transferable shares was an indictable nuisance. The present state of the law was in strong contrast with that which he had just described. There are now at least nine different ways in which whole classes of associations of various kinds can be originated, exclusively of those whose constitution is purely special, and of those which may still subsist under obsolete forms. The power of creating corporations is shared by Parliament and by the Crown with the Board of Trade, the Registrar of Joint-Stock Companies, the Registrar of Friendly Societies, and the Charity Commissioners. The principal acts alone relating to associated bodies amount to more than nine hundred sections, or say as many as the articles of the whole German Commercial Code, and 250 more than those of the French Code de Commerce.

In such a mass of legislation there must be a vast amount of superfluous matter. Any one who compares the Companies' Clauses Consolidation Acts with the Companies' Acts would see that nearly the whole of the former might be dispensed with by making the corresponding sections of the Companies' Acts applicable to Parliamentary Companies and Table A compulsory, with some modifications. A tabular state-

[1] See *Transactions*, 1873, p. 566. This Paper is printed in full in the *Law Magazine*, Feb. 1875.

ment in the first Report of the Friendly Societies' Commissioners of the clauses as to exemption from stamps in the Acts relating to building societies, friendly societies, loan societies, and savings, banks, showed that the substantial differences between the four were very trifling. Another table in the second appendix to the fourth Report of the same Commissioners proved the same point in a more effective manner as respects five different forms of clauses for vesting a society's property in trustees, and enabling them to sue and be sued on its behalf. Besides differences of wording, differences of procedure are also unnecessarily multiplied by legislation, in proof whereof the writer referred to a table in Appendix XI. to the fourth Report of the Friendly Societies' Commissioners, by Mr. Brabrook, assistant registrar, being a comparative statement of the procedure for verifying rules.

The Friendly Societies' Bill of 1874, in its original shape, sought to put order into a portion of this chaos. The first step in this direction had been made by Mr. Lowe's 'Registry of Societies Bill, 1870,' which sought to bring within a common registration system at the Board of Trade all the different bodies (except savings banks) then registered or certified by the Registrar of Friendly Societies, either as such or as barrister to revise the rules of savings banks. The bill of 1874 sought to bring all these into one law, together with trades unions, which are now also registered with the Registrar of Friendly Societies, and scientific and literary societies, now certified only for a particular purpose, but excluding building societies, as provided for by an act of the session. The necessary differences between these various classes of bodies were so slight that out of a bill of seventy-eight sections six were found sufficient to deal with the specialties of all other classes of societies besides friendly ones; representing one hundred and six sections which would have been swept away by making one law with a few special clauses instead of retaining half a dozen special laws.

A new process of generalisation thus begun can be carried on all the more easily with benefit to all the different classes of bodies to which it applies. To alter the law for the worse becomes more difficult through the greater variety of interests affected, whilst any amendment obtained by one inures to the benefit of all, and the uniform procedure tends to greater correctness of practice.

The attempt failed, through the selfishness or short-sightedness of the bodies concerned. The great trading burial societies, pointedly condemned by the report of the Royal

Commissioners, would naturally put forth their whole strength to defeat it. The trades unions—than whom probably no class of bodies would have been more benefited by the bill—raised a senseless outcry against it. The great friendly societies objected to the inclusion of other societies besides their own, and the Parliamentary agent to the Foresters declared that friendly societies should 'insist' upon separate legislation, *i.e.*, should insist that a law which affected them should not be codified, and that the Statute-book, to please them, should remain cumbered with half-a-dozen separate Acts of Parliament where one was enough. In the face of such opposition the bill in its revised shape was cut down to dealing with the classes of societies already dealt with by the Friendly Societies' Acts proper, and by the Cattle Nuisance Societies' Act.

The writer expressed a hope that when the subject was better understood the advisability of more comprehensive legislation would be recognised. There were some, indeed, who thought that all Parliamentary 'Societies' might be brought under the Companies' Acts. Whilst quite of opinion that the Companies' Acts should be enlarged, he thought them in their present shape unfitted for the bulk of the bodies in question. And he thought there was a real distinction, if not one based on etymology, between societies and companies—between undertakings in which capital is the leading element, no matter to whom it belongs, and undertakings in which it is a subordinate element, and membership the dominant one. The great fault of the Companies' Acts was that their system was based upon subscribed capital, that is, on paper promises to pay, and that they required no guarantee of the payment of capital; the requiring of a definite amount of capital for registration adding to the mischief. He quoted an instance of the Tumacacori Mining Company, registered in 1870, with a capital of 2,000,000*l.*, in 200,000 shares, which were all issued as actually paid up, with a directorate comprising a nobleman, a baronet, M.P., &c., and yet in which never a shilling was paid up, and there was never a banking account or cash-book. In this case the public was not victimised, as the directors turned out to be the only creditors, but it might easily have been a swindle as well as a sham. He would, therefore, regret seeing bodies like building societies or co-operation societies, although formed for commercial purposes, forced into the grooves of the present Companies' Acts, still more friendly societies; and he even doubted whether all bodies formed for purposes of life assurance

would not be better detached from the company system, and connected with what he would term the society system. He ended by indicating the following as the basis of a rational English law of association:—

1. Freedom of association with unlimited liability for any lawful purpose, on condition of registering a firm or title and the names and addresses of members. If limited liability is sought for any of the members, the conditions as to these to be similar to those for limited liability association.

2. Freedom of association beyond a certain number under the corporate form, with limited liability, but under conditions sufficient to assure that the capital can be reached when required both by creditors and members.

3. In both the above cases registration to be with a Board of Trade Department, or with some provincial branch of it.

4. The same department to carry through all formal stages bodies requiring Parliamentary powers.

5. Where the objects of association involve personal conditions of membership, or include individual gain, or limit pretty narrowly the interests or benefits of members, and perhaps in all cases of *human* insurance, recourse to be had to a board officer, answering to the Registrar of Friendly Societies, but with more flexible powers, or to some provincial branch of such board or deputy of such officer.

6. The right of special incorporation by Parliament or by the Crown to subsist, but incorporation always to convey limited liability.

Mr. A. Taylor Innes, Advocate, Edinburgh, read a paper on 'Trade Unionism; its Limits and its Future.'[1] He said that the last Congress in Glasgow, which met in 1860, was an era in the history of trade unionism. Since then there has been much discussion as to the origin and the future of these associations. Their origin has been traced to the old crafts or guilds, and they have at least a striking relation to them. Both are founded on an artificial fact—the division of labour, and both are, or propose to be, monopolies. But they differ, not only in the old crafts being legal monopolies, while the modern societies are only voluntary, but in this also and chiefly—the guilds embraced masters and men; modern unions are unions of the men only. For in the old time the master was a man skilled in his craft, now he is a man with

[1] See *Transactions*, 1860, pp. 755, 762, 870, 877; 1867, p. 692; 1868, p. 15; 1869, pp. 22, 606; 1870, pp. 78, 544; 1871, p. 117.

capital. And under the influence of this change the old associations crumbled away and the new arose.

The interest in the future of trade unions has been increased, but also confused, by the proposed unions of agricultural and other unskilled labourers. Strictly speaking, there is no such thing as a trade union of unskilled men. Trade unions are of men skilled in a particular art; the trades are the aristocracy of labour, and the unions perpetuate the distinction. A league of labour is one thing, trade unions are another. But the exclusiveness of trade unions is not the thing which chiefly limits their influence; it is the fact, anticipated by theory and now illustrated in fact, that all excessive action on their part at once reacts on the particular trade, sending capital away from the place, or the country, or the industry, to other places, countries, industries. So long as trade unions keep to the character in which they hitherto professed to meet capital (for in their character as mere benefit societies I do not consider them), *i.e.* as voluntary societies, founded on freedom of association, so long any mischief their acting may be supposed to cause will be limited, local, and temporary, and the system, being one of self-acting checks, will be incapable of producing constitutional revolutionary disturbance. And our looking to the necessary limitations of the present system, while it may suggest to some that they hope too much, and to others that they fear too much, from it, might suggest moderation on both sides in working it. It professes to be a system of freedom of contract, and freedom of association, and is thus opposed to the old theory which threw the responsibility of labour and wages upon a paternal government, and to the modern theories on the Continent which insist that the people as a whole must regulate it and suppress individual or partial competition. At the congress of labour in recent years held abroad this contrast between British and foreign labour theories came out strongly, and it is important to lay stress upon it at present. The whole toleration which trade unions have within this century at last received from the law is founded upon their plea that they respect not only rights of property, but individual freedom. And the maintenance of this equipoise is sure to be insisted on in the future.

A paper on 'The Scotch Law of Partnership—with special reference to Partnership Liability—and English Decisions, from 1860 downwards,' was read by Mr. ANDREW MITCHELL, Advocate. He said the English law on these subjects had been modified by a judgment of the House of Lords in 1860.

The effect of that judgment upon the Scotch law was still unfixed. Before 1860 the state of partnership law in both countries was unsatisfactory. English case-law had settled the rule for England that participation in nett profits inferred liability for the company's debts, and the tendency of Scotch case-law was, perhaps, in the same direction. Thus enterprise was hindered and hardship inflicted. By the House of Lords' judgment of 1860, given in the case of Cox *v.* Hickman, participation in profits was expressly repudiated as a final test of partnership, and the test of mutual agency and principalship subsisted. Further, their lordships seemed to lay it down that the law of partnership generally was a branch of the law of agency. Scotchmen must at once feel a difficulty when this latter view is presented to them. Scotch law has never regarded the contracts as the same; and some of the most obvious features of partnership, it would seem, cannot be reduced to mandate. The Scotch view of the essence of partnership, as found in the older institutional writers, is quite clear: an association, or union of individuals, for making profits for all by use of the means of all. It seems a fair inference that the profits are, further, to be made by all; that the trade and the trade contracts are the association's, not the individuals'. The later Scotch doctrine, that a partner is a *persona*, confirms this inference, and establishes the oneness of partnership in itself, and as to all its relations and acts. One partner binds another, not because of any mandate to do so, but because, to a certain end, they have become one. By the light of Scotch law, something very like this Scotch view is to be found in the judgment in Cox *v.* Hickman. Mutual agency is, perhaps, the closest tie conceivable to a system which desires a *persona* in partnership. The later English decisions in the subordinate appeal courts support this reading of Cox *v.* Hickman, and themselves come even nearer the Scotch view. Intention and ownership of the business are the things relied on in them. The test-question put, Is he owner of the business? always means, in the circumstances in which it is put, Is he owner as equal or fellow-principal? and has no reference to an unequal relation like principal and agent. The effect, then, of Cox *v.* Hickman upon Scotch partnership law is that it removes the sources of difficult English law introduced into Scotland, in the shape of the rule that participation in profits inferred liability and the conception of so-called *quasi* partnership; that it supplies a better working test, mutual agency; and that it gives indications of a final and complete test of partnership and analysis of partnership, viz., joint ownership

of the business, and in so doing gives an independent corroboration of the soundness of the principles of the Scotch partnership law. These views, if correct, teach two lessons with regard to assimilation: 1. Assimilation is not a thing to be pushed on hastily, to the sacrifice of the distinctive good elements of the two systems. 2. Assimilation must not be mere eclecticism: regard must be had to theory and principle. What real good could be expected to follow, for instance, from the adoption into the law of England of the Scotch view of a *persona* in partnership, apart from the principles which, as has been shown, that symbol expresses?

A paper was read by Mr. R. A MACFIE 'On Patent and Copyright Monopolies.'* He said: 'Copyright is a privilege of monopoly, in right of which an author, or his assignee the bookseller, may publish many copies, or few, or none at all, according to his own pleasure, and may restrain every other person from producing or publishing. Copyright is a modern institution, dictated partly by a sense of justice and partly by conviction that to concede it is politic. Fair play demands kindly, if not generous, treatment of literary labourers in the service of the public. Still, a more practical and commonplace view of the case for State interposition on their behalf has been the dominant and guiding consideration. And properly so. The State would not be justified in creating a system of monopoly, especially monopoly of what is far more precious than anything material and perishable, without the justification of public utility. The State has accordingly provided that for a limited, though certainly a long, time no one but the author or his assignee may vend his works. It has established, in fact, a new kind of property, for the law justly does not recognise this as pre-existent or inherent. The natural right of an author does not extend beyond his power to withhold from publication. But in establishing this property Parliament has endeavoured to guard the public interest by limiting the number of years during which the privilege may subsist and the area on which it subsists. A notion prevailed in former times that exclusive privileges not merely could be, but would be, worked so as to conduce to moderateness of price. Probably publishers at the present day would repeat this flattering plea. The general public would receive it with incredulity. A Scotch judge wrote in the last century,

* See *Transactions*, 1869, pp. 172–177.

'This claim of authors to establish right of property in a book after publication is highly inexpedient, as it gives a right of suppression and confers a power of extortion.' Mr. Macfie questioned whether, granting the expediency of some privilege, the duration should not be very greatly limited—the law now prolongs it to the end of the very extended term of forty-two years as a minimum—asking what principle should determine the duration? The sufficiency of recompense and stimulus? Copyright should be such in duration and nature as to obtain for the reading members of the community an early, large, and good supply of literature at moderate prices. Acting with this object in view, the legislator attempts on the one hand to compensate the author for the surrender of his time and talents, and the publisher for the risk and outlay which is his part of the business, on a scale of liberality sufficient to encourage other citizens to do the like, and on the other hand so to limit the compensation, estimated by general experience and results, as to secure cheap and wide circulation of books of merit. If this basis of estimation is correct, it follows that extension of the area over which exclusive privileges operate—increases that of the population subjected to the influences of copyright—better circumstances of the book-buying population, involving greater ability and disposition to read and purchase, combine to make a much shorter duration of exclusive privileges if not more at any rate as remunerative as was the long period of forty-two years at the time it was enacted. There is another way of remunerating authors than the somewhat antiquated system of monopoly, viz., by introducing healthy competition. Why should not we take a hint from what is going on before our eyes with regard to invention? There is undoubtedly considerable similarity between matter subject of patent right and matter subject of copyright. When patents were first granted it was on the understanding that the patentee alone would work his invention, but by and by it was found that his interest (and the interest of the public so far was identical with his) would be promoted by *licensing* other persons to manufacture the patented invention. For these licences royalties are stipulated. That is, anybody engaged in a trade may make and vend the patented article who would be willing to pay the inventor a fair share of profit, after a fair share of monopoly, whether of six or twelve or twenty-four months, as a general rule, with special provisions for highly illustrated works and others which may be dealt with exceptionally in the region of literature and copyright. I do not now care to say, the grand and vitalising

influence of competition should be brought into play in the same manner, *i. e.* any person who is engaged in the business of publisher should be allowed to republish on condition that he obliges himself to print under the eye of the author, so as to insure fair remuneration, and to pay him a statutory percentage on the selling price. That percentage, I suggest, should be 5 per cent., a rate which I suppose is equal to 20 or 30 per cent. on the cost of mechanical production. With such a protecting duty, such a levy or mulcture, authors would presumably be highly satisfied, and the original publisher would have no reason to complain of unjust or illiberal treatment. He has the opportunity of making with the author such terms as he thinks fit. He probably would divide with the author this mulcture under competitive copyright. The greater the number of republishers, the greater the revenue to both, and (this is the effect that will commend the change to philanthropists and statesmen) the more will competition tend to reduce prices and promote activity in pushing sales, so as to insure a vast increase of circulation and facilities for reading. Indeed we might, without being visionaries, look forward to the following beneficial results:—

1. Many more people would be able and willing and want to buy books then than now.

2. Books would be so cheap and plenty that after perusal they would be given away freely.

3. The labouring population could and would acquire and possess books to a prodigiously larger extent than unfortunately is or can be the case now.

4. They would have access to new books many years earlier than heretofore, indeed when still fresh, and not, as now, only when stale, if at all; for indeed works of literature are, as a matter of fact, almost wholly beyond their reach, except that of the penny newspaper.

5. Village and school and workshop libraries would be universal.

As to whether as many new works would be composed as there are at present. If it is correct to anticipate equal or augmented profits to authors and publishers, the number of works would be as great or greater; but, supposing it to be otherwise, it would take place in the excessively numerous papers that minister to amusement and sensationalism, and not in the solid and informing publications which are written under the impulse of nobler aims than pecuniary advantage, and which, there seems reason to fear, are stifled by the rather *too* vigorous pressure of other occupiers of the journal.

After detailing the altogether new sources, kinds, and degrees of foreign competition to which British industry is yearly becoming more exposed, and the disadvantage our commerce and manufactures are subjected to from the *régime* of free-trade in the United Kingdom being unaccompanied by free-trade in other countries which are consumers now, but are becoming more and more producers and even exporters of manufactures (an inequality sanctioned in an unstatesmanlike spirit by treaties with these countries), the paper urged that Parliament ought to legislate in such manner as to remove every actual restriction on freedom and excellence of production. 'We open our ports free of duty to foreigners, while we subject our manufacturers to home taxation on their productions, to a sort of excise called royalties.' There is no limit to the demands that patentees may make. No inquiry is made at the Custom-house whether in their own countries the foreign rivals thus favoured have been subjected to any like burden. The probability is strong that they have not been, for comparatively few patents are taken out on the Continent (in Prussia, as a strong instance, not one is granted for twenty here), and in some countries, notably Holland and Switzerland, there is not any patent system at all. Such inequality is not only a wrong, but bad policy. It tends powerfully to drive trades from the United Kingdom. The paper proceeded here to controvert the views of Mr. Brown of Glasgow, and to defend Mr. Macfie's system of national or, in preference, international rewards or grants of honours and money to inventors.

As there is no probability that Holland and Switzerland will revert to or adopt a patent system, and as it is inequitable under the *régime* of free trade for some countries to maintain and others to repudiate invention monopolies, the only escape from the dilemma is by instituting for ordinary inventions an international machinery for rewards such as is described in Mr. Macfie's book on patents (copies of which he will give to any member of the Association who remits him sixpence for postage). Meantime, at least, compulsory licenses ought to be the law. Unless abolition is resolved on, there must be a patent reform, even though it promises to be of a mere temporary character. The commercial community are to blame for not studying this whole question, and preventing public opinion from being formed in a direction unfavourable to our industries and to national interest and patriotic aspirations. The defenders of patents are wider awake, and actually influence some Chambers of Commerce. Mr. Macfie concluded by commending the views of M. Schneider as set before the late Parlia-

mentary Committee on Patents. This eminent statesman and machinist would allow in very special cases exclusive privileges on proof shown of the originality of a great invention, exceptionally, but not as a matter of justice or right.

A paper by Mr. JOHN RUSSELL SOWRAY, F.S.S., on 'Teinds and Stipends,'[1] was read. After stating that all lands in Scotland not expressly exempted are liable for teinds (*i.e.*, tithes), and that the stipends of the parochial ministers of the Established Church are provided out of the teinds, the paper proceeded to show the trouble, inconvenience, and expense connected with the apportionment and collection of the stipends—the greater part of the teinds and stipends being fixed in various kinds of grain instead of money, the value of the grain differing annually, so that the ministers have to collect from each landowner in the parish a different sum each year. But the system is rendered still more complicated by the right of the ministers to apply to the Teind Court for an increase of their stipends every twenty years, when the apportionment would have to be re-adjusted and an inquiry into the state of the teinds made, giving rise to an expensive and tedious process, made additionally so by the proceedings being removed from the parish and conducted before a judicial tribunal, with all the expensive formalities of a legal action brought by the minister against his parishioners. The questions which frequently arise are intricate and vexatious, and the litigation sometimes lasts for several years, during which the parishioners are in a state of uncertainty as to the extent of their liability. The object of the paper is to propose a means of relieving the ministers and the landowners from these proceedings, and it suggests that, first, all lands should be redeemed from future liability for teind and stipend; and, second, that the ministers' stipends should in future be provided out of the redemption fund. To effect this it is proposed that the present Teind Court should be abolished, and that in its place an extra judicial commission should be established, somewhat analogous to the Tithe Commission in England; that the commission should deal with the teinds of each parish, hearing and deciding (subject to appeal) all questions regarding them, and settling the amount in money for which each property is liable; that the commission should afterwards ascertain and fix the price which should be paid by each landowner to redeem his

[1] This paper has been published in pamphlet form by Messrs. Adam and Charles Black, Edinburgh.

lands from the liability for teind and stipend, and that such price should then be paid to the commission by the landowner, either in one sum or by annual payments extending over twenty years, at their option; that the commission should thereupon invest this money and apply the income in payment of the ministers' stipends, and of any augmentations thereof which they might from time to time grant. The following advantages are claimed for this scheme:—

1st. That the ministers would be spared the troublesome and invidious task of having to collect their stipends from their parishioners, and of having periodically to proceed against them for an increase of that stipend.

2nd. That the landowners would be freed from a serious and increasing burden on their property, and would be relieved from the expense and annoyance to which they are liable when an increase of stipend is applied for.

3rd. That the fund for providing stipends would be a general one, and not confined to each parish, so that ministers who are now inadequately provided for out of the teinds of their particular parishes might hope for some relief out of any surplus that might arise.

4th. That, in the possible event of a reconciliation of opposing sects, the existence of a general fund might prove of great utility.

Mr. C. H. E. Carmichael, M.A., F.R.S.L., Barrister-at-Law, read a paper on 'The Swiss Juridical Congress at Coire.'[1] The importance of this Congress, he said, which opened on September 6, 1873, consists in the question of the possibility of fusing in one code the French and German systems prevailing in Switzerland. Reporters were chosen for both sides—M. Carrard of Lausanne, and Herr Hilty of Coire. Berne was the first canton to begin this work ten years ago, and the result has been a general report and the first book of a draft code. In the twenty-two cantons and portions of cantons twenty-six law systems prevail. Of these fourteen only are codified, and half of them belong to the Code Napoleon system enjoyed by the French cantons. In the German cantons nineteen law systems obtain, of which six only are codified. The German reporter charges the French system with an absence of moral *personæ*, which were also almost absent from Roman law. Against this are set by the French the want of a title on registration (Actes de l'État Civil) under the German law. By the new Federal Con-

[1] This paper is printed in full in the *Law Magazine* for December 1874.

stitution, art. 53, registration and the custody of registers are to belong to the State. In the marriage law there are serious differences. Divorce is recognised by all the Protestant and rejected by the Roman Catholic cantons. In both marriage is considered as a religious act. Some cantons add communal to canonical impediments, regarding the commune as an extension of the family. The New Constitution, article 54, forbids any impediments based on confessional (*i.e.*, ecclesiastical) or police considerations. 'Patria Potestas' is in German-Switzerland reduced to 'Tutela,' and even this is subject to the 'Obervormundschaft' or (guardianship-in-chief) of the municipality, one of the most characteristic of Swiss institutions, extending not only to lunatics and prodigals, but also to paupers and women. 'Tutela' of women is found in some cantons even of French Switzerland, but both reporters think these and other rules must vanish. In the law of things there is as much divergence as in that of persons. Joint ownership by the family prevails in German Switzerland, and much of the soil has remained undivided. Rights of vicinage are more stringent than under Roman law. The will is almost as unknown there as it was in the days of Tacitus. Testation has till now been strictly limited, and reservation of estates (Réserve Héréditaire) made for heirs and relations, even bequests sometimes requiring their consent. On obligations and hypothec it is desired by the reporters that the German law should prevail, and legislation on those subjects belongs to the Confederation by art. 64 of the New Constitution.

Mrs. Lowe, Hon. Secretary of the Lunacy Law Reform Association, read a paper on 'The Insecurity of Personal Liberty from the Present Lunacy System.'[1] She disdained all attempts to treat of the Lunacy Laws in the abstract, but wished simply to call attention *to their practical working*, as shown in the official reports, and by judicially sifted cases. The necessity for medical certificates before incarceration afforded little protection, because any registered practitioner, in actual practice, might certify, however low his moral and professional status; and further, most informal documents were received at Whitehall as justifying detention. By the Official Report for 1872, 2,314 persons had been incarcerated on informal documents in one year alone; and such informality alone argued gross incompetency in the certifiers, or absence of any real grounds of detention. Parliament had enjoined

[1] This paper is printed in full in the *Drawing Room Gazette*, February 6 and 13, 1875.

that the letters of private patients should be sent as addressed, unless the superintendent prohibited such sending by endorsements thereon, and every letter so endorsed was to be shown to the Commissioners; but all these provisions had become a dead letter, and private patients, as a rule, were debarred from all communications with the outer world except through their incarcerators, whereby, doubtless, many cases of unjust detention were prolonged. A gentleman had recently recovered liberty, after fourteen years of detention, through getting a letter secretly posted to his solicitor. In some of the costliest proprietary madhouses much parsimony and foul abuses prevailed. The patients suffered cruelly from bad drainage and imperfect ventilation. The first step towards reform must be a searching judicial inquiry into the working of the Lunacy Laws, and this the audience was urged to assist in obtaining.

His Excellency Senor Don Arturo de Marcoartu, of Spain, read a paper on 'The Representative System with regard to the International Question.'[1] His Excellency said, —The representative system, which, more or less broadly, more or less perfectly, directly or indirectly, prevails in questions municipal, provincial, or departmental, affecting the nation, is not to be found existing in any country for the settlement of international conflicts; and the chief of the State is alone left the arbiter, whether to declare for war or to adjust the terms of peace. The power to decree war ought to be deposited in the hands of the people, to be exercised by means of a plebiscite; and neither the head of the State or society possess any just right to compel any individual to fight who may refuse voluntarily to offer his life for that purpose. In this age of the emancipation of the races it is inconceivable how, while we free the African from slave labour during peace, the most civilised nations should continue to be the slaves of the heads of the State, who, whether republican, aristocratic, or representative-monarchic, dispose freely of the lives of their subjects in time of war. Only let a man once understand that he alone possesses the plenary right to dispose of his existence; let this natural, although forgotten, right be once introduced into the constitutions of the nations; insist that a plebiscite shall invariably and indispensably precede a declaration of war, and you will at once render these disgraces to humanity less frequent and more difficult. It is pertinent to state now,

[1] This paper has been printed entire by the author.

that that inalienable and imprescriptible right of the citizens of a nation—the right of peace and the right of war—was proclaimed by the French charters in the last century. It was his hope that before many years an International Parliament will be constituted, to draw up such laws as ought to rule relations between nations estranged to each other, as the Parliaments of Confederations fix the reciprocal relations between the nations so confederated, and as National Parliaments, Congresses, Cortes, Assemblies, Reischstag, and the Bund establish relations between municipalities, provinces, counties, and departments. No doubt can be entertained that by means of the education of the people, which moralises and enriches them; by the development of facilities of communication, and doing away with the trammels which oppose the free circulation of thought, individuals, and material products; and that, with a uniformity in money, in weights, and measures, and in commercial codes, war will eventually become more and more difficult. In order to accelerate our march to the most steady peace, and to remove to a greater distance from war, we must urge forward the development and progress of the education, and the wealth, too, of all classes in all nations; to bind more closely the interest of all nationalities, and to reform the existing non-representative system on the International conflicts. He considered it our duty to promote the education and morality, and increase the wealth, of the lower classes of the people all over the world; to establish and to extend the liberties of transit and circulation through all countries, and removing the existing difficulties in the way of intellectual and material traffic.

Sir COOMARA SWAMY, M.L.C. (Ceylon), read a paper 'On the Ancient Forms of Administering Justice in India, and, in connection therewith, Eastern Communal Government.'[1] The writer said it would seem that in ancient India, at least before the date of the play called the 'Toy-cart,' justice was administered in a very simple and inexpensive manner, and without the intervention of professional judges and lawyers. The Hindus having been from remote antiquity grouped into families and castes the heads of the families and the castes acted as judges, and settled the disputes arising between the different members of a family or the different members of a caste. The graver cases and those arising between caste and caste had to be disposed of by the Sovereign himself and his ministers. For this purpose the

[1] This paper will be printed in full in the *Law Magazine.*

king sat at appointed times in 'Kolu,' which corresponded in some respects to the 'Aula Regia' of mediæval Europe. The family and caste systems furnished a very effective legal process for the enforcement of the decisions of those patriarchal courts. Exclusion from the family or the caste was the consequence of disobeying them. Hence in olden times none dared to defy them. The relics of this system are even now found in India. One amongst many others may be here cited. Amongst the Nátu cotta Chetties of Southern India, up to this day disputes are settled by their elders and the heads of the caste assembled in what is called 'Nakaram.' This is generally held at night, so that it may not interfere with the daily avocations of life, and the place selected for its meetings is a choultry or temple, so that a degree of sanctity might be attached to its proceedings. All had their say, and all kinds of evidence were admitted. Friends acted as counsel. The opinions of the majority were consulted, and when judgment was pronounced, the parties submitted to it willingly. And it was on equity, not so much on strict justice, that the decisions were based. The plaintiff never got all that he should have got, nor did the defendant lose all that he should have lost. Some *juste milieu* was hit upon. The object was not simply to administer bare justice, but to make friends of the litigants, so that they may not be afterwards quarrelling and litigating. At present, notwithstanding the introduction of purer systems of administering justice into India, the natives have grown over-fond of litigation, and are wasting their resources and energies in courts of law. Such could not have been the case in olden times. Though law courts and legal procedure were known to the Hindus from early times, yet it was under the Mahomedan rule, and especially in later times, that they have become fond of litigation for the sake of the excitement it afforded them. Once at Lucknow, the writer found a large part of the town illuminated. On inquiry, he learnt that it was in honour of a cause having been gained by a rich zemindar. But the luxury of litigation is not confined to the rich alone. The poor are as fond of it as the higher classes. To illustrate the spirit of the decision of the old Indian courts, Sir Coomara Swamy read out several amusing and witty judgments of a fabulous judge called 'Maryáti Ráman,' which showed much originality, quaintness, and knowledge of human character.

REPRESSION OF CRIME SECTION.

INDUSTRIAL FEEDING SCHOOLS.[1]

How far is it desirable that the Industrial Schools Act should be extended to day industrial feeding schools?

MISS CARPENTER, of Bristol, read a paper on this question. She proceeded to consider, first, the true position and intention of certified industrial schools; secondly, to show why they ought *not* to be employed to supplement the deficient action of School Boards; and, thirdly, to show that day industrial schools can meet the difficulty which is now felt by School Boards, provided such legal enactments are made as will give to School Boards the power of sending children compulsorily to them, paying for their food from the rates, and recouping the amount, as far as practicable, from the parents.

She briefly reviewed the history of the reformatory movement, and showed that the certified industrial schools had an entirely different object from that to which they have been frequently applied, for children who have parents quite capable of taking care of them. In the reformatory and industrial schools, authority over the child is entirely removed from the parent, and the whole cost of the child's education and maintenance is thrown on the public, except in cases where a small weekly sum is obtained from the parent. These schools should not be employed except in cases where it is absolutely necessary for the rescue of the children that they should be removed from the parents. It was hoped by some, that the School Boards, in co-operation with these schools, would act upon the large mass of neglected and destitute children who are known to exist in all our large towns, and who supply these schools with inmates. This has not proved to be the case during the four years of the operations of the School Boards. The efforts of the boards have, indeed, brought to light the existence of this large class of children who do not attend the ordinary schools, and for whom they are not at all suitable; their neglected condition makes them require civilising influences, industrial work, and direct moral training, as well as intellectual instruction. The London School Board has met the difficulty by sending num-

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[1] See *Transactions*, 1873, p. 335.

bers of them to certified industrial schools; up to March 25, 1874, 1,281 had been so sent, at a cost to the public of £25 per annum for each child, or £32,025 per annum; each child might be regarded as staying three years, and costing £75. It is evident that the public cannot sustain such an outlay, nor is it right that it should do so.

There can be no doubt that, in connection with the vigorous action of the school agents, an impression may be made in some districts which have been thoroughly worked. But when we know the miserable condition of the children, whose name is legion, in many parts of the metropolis, the impossibility of placing them in the ordinary Board school, both on account of the injury they would inflict on the children of the decent working classes, and their inability to receive instruction in their actual half starved and wretched condition, we must feel that to spend such enormous sums on a few, comparatively, while others must be neglected, is not wise or right. The certified industrial schools ought not to be thus employed to supplement the work of School Boards, and they cannot be thus employed universally in the large cities of the country to give education to children who are not willing to attend school. A serious evil has already appeared, under the too free use of the Certified Industrial. Parents are in many cases even induced to apply for admission for their children under the 16th clause of the Act, and thus voluntarily resign their parental authority, the Board paying 5*s.* weekly for each of such children. In May last a conference was held in London on the working of the Industrial Schools Act, at which Captain Brookes, the superintendent of the Feltham Industrial School, stated that 62 boys had been received into the school under that section, of whom 41 were sent at the instance of the London School Board. They were not worse than the others, but if anything more manageable. 'I have an idea,' he says, 'that there is a certain amount of parental collusion with reference to the working of this section. They are simply children who will not of their own accord go to a Board school or a national school; the father goes to his work, and the mother goes out charing; the School Board officer pops upon him and takes him before the School Board sub-committee, and they direct him to be taken before a magistrate. Practically he is a truant.'[1]

Miss Carpenter also quoted the opinion of Mr. Glossop, to the effect that this Section of the Act of Parliament has been rather perverted, by sending children under that Section not originally contemplated, and not only vicious and uncontrollable

[1] For a report of this Conference see *Reformatory & Refuge Journal* for July, 1874.

boys. Such employment of certified Industrial Schools by School Boards appears perfectly untenable.

In the third place, how are the class to be reached which remain untouched by the action of the School Boards? That such a class exists, and that it cannot be reached by purely educational machinery, is now acknowledged by the Government. The Rev. Sydney Turner, H.M. Inspector of Reformatories and Industrial Schools, says in his report of last year: 'I had expected that the establishment of School Boards in our larger towns, and their exercise of the power of enforcing attendance at ordinary day schools, would have materially lessened the number of the disorderly and neglected children for whose better training and restraint the provisions of the Industrial Schools Act have hitherto been so freely applied, but my anticipations have as yet been entirely disappointed, and from the information I have received from the School Boards of our largest centres of population, I am led unwillingly to the conclusion that the 'arab class' of children, as they are called, cannot be reached by the powers and provisions of the Education Act as it now stands, or by the purely instructional machinery which it recognises.'

Something more is required for these children than instruction, which their minds are not capable of profiting by. Besides intellectual culture, they require *civilisation*; they need to be taught the *simple elements* of *religion* and *morals:* to be brought under the discipline of duty, to have their mental and physical powers so trained that they may earn their living, and discharge their duty in the state of life in which their lot is cast. All this forms no part of the educational system of the country, and to attempt to force that system on these children will only defeat the object intended. And yet the certified Industrial Schools cannot supply the want. These children are not to be taken from the responsible control of their parents and from family ties, nor ought the responsibility of these children to be removed from School Boards elected and supported by the people, and from *local* rates. This gross ignorance and neglected condition in which they are growing up is not to be found in *every* part of our country; where it *is* found it should be grappled with by local agency, for it is owing to local circumstances that it exists. The burden arising from it is not to be thrown on the country at large represented by the Home Secretary, nor on the National Treasury.

It is evident that the requirements of these children can be met only by their remaining during the greater part of the

day in a Day Industrial School, where they should have proper supervision, and a due provision of industrial training, instruction, and recreation. They will of course require a regular supply of simple food, to develop their physical powers.

Now it has been sufficiently *proved* during the last quarter of a century that where the most wretched children have attended such Schools they have grown up respectable, and the succeeding generation has derived the benefit anticipated; their children have not been brought up in the wretched condition from which they themselves were rescued.

Edinburgh and Aberdeen, Manchester and Liverpool can bear testimony to this.

But voluntary effort is not sufficient; the worst cases will not be reached by it. The real street arab and the children of dissolute parents prefer a precarious subsistence *with their liberty*, to the control of a school. The School Boards cannot at present *compel* the wild neglected children, whose fees they pay, to attend such schools regularly, though they know well that the mere payment of school fees will not lead to any regular attendance at school.

The Guardians of the Poor may give an allowance for food to the out-door pauper child, and may require attendance at school, but they cannot compel the worthless parents to spend such allowance on the half-starved child rather than their own indulgence. *The School Boards should have power to send all the children to such a school that cannot be induced to attend the ordinary schools regularly;* the Guardians should have power to give the out-door relief for each child to the managers of the schools, unless it can be proved that the child attends some other regularly and is properly fed. But it is found that many of the parents of these children are quite able to feed their children. Some unexpected facts bearing on this have been elicited by the Bristol School Board, having taken under its own charge a Day Industrial School which took the place of the old Ragged School. As the Board had no power to supply food or to provide industrial training, the original committee of the school undertook to supplement with these the action of the Board. It was feared that the school, the premises of which would accommodate 200, would be filled, the children lured by the offer of food, though it was not a free school and a fee of 3*d.* weekly was required, and that there would be a difficulty in raising funds to supply food. Instead of this, the average attendance has never reached 60. Decent parents do not wish their children to associate with these wild ones; bad parents would often prefer

having them at their own disposal. Again, though the District Committee of the School Board pays the fees of all the children whose parents appear unable to pay—and it was intended to limit the admission to the school to these—yet so many children who were known to be frequenting the streets were rejected by the Board, as being able to pay fees, that the Feeding Committee undertook to pay the school fees of such children as were ascertained by their own agent to be suitable cases. It proves that more than half of the 89 children now on the books are not paid for by the Board, and many of the parents are in circumstances to pay their own school fees. Again, the attendance of the scholars is too fluctuating to produce the desired effect on their characters; of the 89 now in the school, 61 have been admitted since the commencement of the year up to September 8, and 25 have left. In the preceding year 84 were admitted and 84 left. And while a good school is thus provided which might receive 200, not a third of the number are in it, though every offer is made to clear the streets of vagabond children, and in many localities of the city they are still to be found as numerous and as wild as if no agency were in existence.

It will be necessary to have a short Act of Parliament, supplementing the present Education Act, giving to the Board the power necessary to carry out effectively a Day Industrial School wherever such a school is required, to carry education to the very lowest stratum of society.

The Board should have the power to establish and carry on Day Industrial Schools, or to certify as fit and proper such schools as may be established by voluntary effort, making payment for food not above 2*s.* weekly.

The Board to send, under order, to such schools, all children as are found wandering in the streets or not attending school, after proper warning. The parents or guardians to be compelled to send the children regularly, and to be liable to punishment if this is neglected.

The Board to have power to remit such order on sufficient guarantee being given that the child will attend regularly some ordinary day school.

The Board to have power to recover from parents or guardians the whole or part of the money so spent in food, and from the Guardians of the Poor the allowance for the child, if an out-door pauper.

If such an Act is obtained, the children will be under the direction of the School Board without the rupture of family *ties,* and will have the education needed without any encourage-

ment being given to dissolute parents. The rates will not suffer, but rather be relieved, by lessening the number of children who are growing up to crime or pauperism. At the same time the certified Industrial Schools will retain their true place under the Home Secretary, and be confined to the young persons for whom they were originally intended.

After this system has had time to work and show results, we doubt not but the number of Reformatories and certified Industrial Schools will be diminished; and eventually the Day Industrial Schools may have done their work and be rarely needed—the greatest possible proof of their success.

DISCUSSION.

Dr. Neilson Hancock (Dublin) thought the proposal of Miss Carpenter was founded upon sound principles. Industrial schools originated in Scotland, and the earlier ones were day schools; and one remarkable effect they produced was, that they reformed not only the children but the parents also. In the substitution of boarding for day industrial schools the possible reformation of the parents had been too much lost sight of. In England, when the parents had been found, it had been thought that the first step was to separate a child from its parents. The working of the industrial school system—of boarding schools as distinct from day schools—had been successful in the case of orphans, who constituted a large proportion of their inmates, and for whom day schools were not so well suited. There was no reason why we should adhere to the boarding system exclusively. It was wise to retain it for orphans, for the children of habitual criminals, and for children who were really uncontrollable; but where parents were merely negligent, or pauperised, or exceptionally unfortunate, it would be found that the day industrial school was the school best adapted for their children.

Mr. A. J. S. Maddison (Secretary to the Reformatory and Refuge Union) said that industrial day schools were, comparatively speaking, a mere experiment, and had only been tried in connection with one School Board, viz., that in Bristol. The real question seemed to be, How far was it desirable that the Industrial Schools Act should be extended to Day Industrial Feeding Schools? The Act was applicable to certain classes of children described therein as begging, wandering, having no home, orphans, and those whose parents were undergoing penal servitude or imprisonment. To all these, described in the 14th clause of the Act, the day industrial school would be of no service. Those, too, described in the 15th clause, the Legislature, it appeared to him, had also wisely decided should be sent to an industrial school, the very first condition of which was that it should be a school in which children are *lodged;* thus recognising that, as all the children

to be dealt with under the Act have either no parents, or bad parents, or parents unable to control them, it is absolutely necessary for the State to lodge them. Indeed, he could not see how even it was proposed to extend the Act to day schools with any advantage, except it were the 16th clause of it, and here Miss Carpenter admitted that it was the abuse of the clause that was productive of evil. Surely the cure then was to enforce the clause more rigidly rather than establish day industrial schools, which he contended had more relation to the Education Act than to the Industrial Schools Act. But even if the Education Act could be extended to them, would it be really economical or a waste of money? While it was very probable that some cases now sent to industrial schools would be sent to the day industrial, it must also be remembered that many would be sent to the day industrial who are now sent to elementary day schools; but a child would cost 2*s.* a week in a day industrial school, and at present School Boards paid only 2*d.* per week for the children they sent to school. Would it be wise to keep these children for twelve hours a day in an industrial school, and send them back to their homes at night, and on Saturdays and Sundays? At a conference on this subject, to which Miss Carpenter had alluded, one of the managers of the Feltham School had stated the great object of the Industrial Schools Act was to rescue children from their parents, and this the day schools would not do. The relapses among those who leave industrial schools were mainly due to the children returning to their parents, so that it seemed at least very improbable that the extension of either the Education Act or the Industrial Schools Act to day industrial feeding schools would conduce to the prevention of crime, or be truly economical.

The Rev. J. Page Hopps, as a member of the Glasgow School Board, and of its Special Committee for carrying out that part of the work now under consideration, could assure Mr. Maddison that if he were upon that Committee, and were engaged in putting into operation the school attendance clauses in Glasgow, he would say it was absolutely necessary there should be some such school as Miss Carpenter advocated, into which might be sent the poor, hungry, and ragged children who had to be dealt with. It had really become a question whether the compulsory clauses were to be enforced or ignored in Glasgow; whether the Act was to break down or not. There were many of these poor, hungry, and dirty children who had not learnt the first rudiments of keeping still and of being under discipline and control, and who were utterly incapable of receiving instruction with other children in ordinary schools, while it was also quite impossible that decent children could associate with them. He expected to see in Glasgow, before this part of the work was accomplished, the decent children leaving the schools by one door when the rougher children were introduced by another. However poor might be a child's home, and however bad its parents, it was our duty, as far as possible, to preserve the home tie by sending a girl or boy back to it at night. He would take children away all day, feed them, and teach them, and keep them industriously employed, and then let them go back and take their chance; and he believed that children so returning to their

homes would be social and domestic missionaries to their fathers and mothers. He would go further than Miss Carpenter proposed to go. What was wanted was something like the power to arrest the children found in the streets at certain hours, and under circumstances indicating their abandoned condition, to trace them to their homes, to compel their parents to do their duty, and if they cannot or will not, to do it for them, and make them pay if they have the means. But he did not think the work should be done by the Poor-law authorities, because too much contact with them pauperised the people. [Miss Carpenter explained that what she meant was, that children who were actually paupers should be sent straight to the proposed schools by the guardians or their officers instead of the school fees being given to the parents to spend in drink.] From constantly visiting the homes of the people in order to enforce the compulsory clauses, the officers of a School Board were well able to judge what were the circumstances of parents, and to decide whether they stood in need of the help the industrial school would give; and therefore he would vest the power of deciding this in a School Board and its officers. The Scotch Education Act differed from the English Act in this, that in Scotland a School Board had power to erect an industrial school, but it was doubtful whether a Board had power to support such a school out of the rates, a defect which could, of course, be remedied by a short Act.

Mr. Barwick Baker (Gloucester) regarded a reformatory as a school within the ordinary acceptation of the term; it was a school which developed habits of work. When he began reformatories he was very anxious to have had an Act passed to throw a considerable portion of the burden of cost on the Poor-law Guardians, so that they might recover it from the parents. The great difficulty in the management of reformatories, industrial schools, and feeding schools was to avoid making it worth the while of parents to bring up their children improperly, in order to save themselves the cost of keeping them by getting them sent to these institutions. If a child were given one meal, a bad parent would allow that to be his only meal. The great object was to compel the bad parent to find sufficient food for his child, and the industrial feeding school would afford a means of attempting to do that. The effort had been made in connection with reformatories, and he was ashamed to say with how little success in obtaining from parents anything like the cost they must have incurred in bringing up their children honestly at home. He did not expect to get the full cost of keeping a boy in school, and of paying men high salaries to teach him to work; but still something more ought to be obtained from the parents than the boy would have cost at home. Nothing like that was recovered at present, and he did not see how it was to be done. It could hardly be expected that the police should be able to examine into a man's earnings completely and bring him before a magistrate when it was so entirely a by-duty, had so little to do with the magistrate, was so much connected with the reformatory school rather than with the justices. It was the business of the Poor-law authorities to know what were the means of each one who applied for relief; and it ought to be understood that a parent not paying for his child was

applying for relief for such child. He would have the parent offered the house if he would not pay for the relief of his child. When he first tried to throw the duty upon the Poor-law authorities, they were aghast at the thought of having more work thrown upon them, and they would not entertain his suggestions. What he proposed would be by no means acceptable to a great many good friends, chairmen of Boards of Guardians; nevertheless, although a great deal had been put upon them somewhat unfairly, yet he should be glad to see this additional burden put upon them, and he believed they would do it most thoroughly and efficiently if they were allowed to say, 'So much will pay the cost of the keep of your child; if you cannot repay us you must come into the house.'

Mr. Sheriff BARCLAY (Perth).—It was very obvious to every one that there was the difficulty of tempting parents to neglect their children; he had experienced it again and again. But in a school of 300 children there was not one who could with safety be returned to its home, and no case had come under the 16th section. Discrimination had been exercised, and some had been refused because in their case it had been felt that it would be injurious to rend the home tie. God had placed men in families, and the family tie ought not to be rashly sundered. On that ground the plan of Miss Carpenter was highly commendable, because it admitted of the maintenance of that relation which had been blessed to parents as well as children. But he had known cases in which a boy could not be sent out of the school on an errand without being detained by his parents, and, in a night or two, sent out by them into the streets to beg. No general rule could be laid down, but there were many cases that were not suitably met by the existing boarding industrial schools, but which would be properly met by Miss Carpenter's plan, to which he could not see any objection. He did not see how the School Board could carry out the Act without some such supplement. In the industrial schools with which he was connected, when the cases were gone into, it was generally found that the parents were more in fault than the children.

Mr. DONNELL (Professor of Political Economy in Trinity College, Dublin) said the discussion had brought into relief the difficulty of reconciling the reformation of children in industrial schools with the maintenance of parental duty and responsibility. If these were to be maintained at all some such school as Miss Carpenter had sketched out must be resorted to; and from such experience he was convinced that the industrial school system would, if not remedied in this way, end in failure, moral, social, and economical. In Ireland the industrial and reformatory school system prevailed 65 per cent. more than in Great Britain, and the cost in Ireland was in still more striking disproportion. In 1872 the cost was 110,000*l.*, while in a portion of England and Wales of equal extent the cost was only 38,000*l.* When it was considered what a poor country Ireland was the significance of these figures would be appreciated. The ordinary vote from local rates in Ireland for the maintenance of each inmate of one of these

institutions was 7*s.* 6*d.* a week; that was supplemented by voluntary contributions; and therefore the cost of each inmate was enormous, and infinitely more than an honest parent could lay out upon his child. In some cases it amounted to 15*s.* and 16*s.* a week, and what parent could possibly lay out such a sum on the education of a child who had never relapsed into crime? Was not this offering temptation to evade parental responsibility? Facts had confirmed this view, for in the case of an institution at Belfast it had been clearly brought out that parental responsibility was evaded, and that families had received indirectly sums that would have furnished small endowments. No less a sum than 700*l.* had been expended upon three members of one family. The management of the Irish industrial schools was entrusted to self-appointed grand juries, and the cost of their maintenance came out of the pockets of those who had no voice in the management of them. There were eight Protestant and forty Catholic institutions; their rate of growth had been enormous; and they offered, under the present system of irresponsible management, great temptation to parents to evade their duty. So far as Ireland was concerned, Miss Carpenter had suggested the right plan when she proposed industrial schools to be managed by locally-elected boards. As to recovering the cost of the maintenance of children from parents, that had been a perfect farce in Ireland; the contributions of parents had been infinitesimal. He agreed with Mr. Baker that Boards of Guardians were more capable of extracting money from parents on this account than were the police. He did not wish to raise a vexed question, but in Ireland the industrial school system was purely a sectarian one, and produced the most intense sectarianism, which it would be sound public policy to discourage by bringing up the children as members of the same community instead of treating them as members of hostile sections of it.

Mr. Mark Whitwill (Bristol) said that in that city education was made as compulsory as the Education Act would allow. The Board passed by-laws and appointed eight visitors, and in three years more than 1,000 parents were summoned before the magistrates. It was found that there were many parents who had no moral control over their children. There was power to summon the parents before the magistrates, and to fine and imprison them, for refusing and neglecting to send their children to school; but there was no power to deal with the children, and that was just the power that was wanted in these cases. What was found necessary was that the School Board officers should exercise powers of police, take up neglected and destitute children, and deposit them in school. If a child were taken up in the morning there must be power to keep him all day, and if kept all day he must be fed; and hence the necessity for establishments where children could be fed as well as taught. The class of children corresponded to those who were sent to certified industrial schools, and they required similar training. They were unaccustomed to any intellectual exercise, and it was undesirable and impracticable to keep them all day at intellectual work. Therefore they must be occupied for a portion of their time in industrial work. In the certified industrial schools three or four hours of the day were devoted to intellectual work,

and the rest of the day to industrial work and recreation. A similar plan should be adopted in these day industrial schools. They should be looked upon as supplemental to certified industrial schools, and not in any way as superseding them. There were many children who need not be sent to certified industrial schools, and who yet ought to be taken away from their parents for the whole day; and he had in his hand a list of 150 such children in Bristol. Some of them had been and others would be dealt with under the existing Act. Of course there were others whom it would be quite wrong to send to their homes at night, and for these the existing schools must be retained; but where the parents were not incorrigibly vicious or immoral, but simply poor, ignorant, or lacking in moral control over their children, they would not receive serious moral injury by returning to their homes for the night.

Mr. Sheriff WATSON (late of Aberdeen) said it sounded strange to him to hear the question discussed at all. In 1841 he established schools of industry. The proceeding was a very plain and simple one; it was simply to take poor, needy, and destitute children off the street and give them three good and wholesome meals a day, three hours' intellectual instruction, five hours' work, and then send them to such homes and parents as they had. That system was worked until the Industrial Schools Act came into operation. Then it was said, 'We must take the children by night as well as by day,' although it was proved that parents had been greatly improved by the influence of their children who had been taught in these day industrial schools. It was said there need not be one uncared-for or untaught child, and the children were gathered up into the new schools. Only one still maintained the character of a free day school; they called it Sheriff Watson's Industrial School; and it was still carried on upon the original plan. The children fed there, at a cost of £5 a year, would compare in physique and intelligence with the inmates of any institution, and the interest of parents and relatives in these children was not destroyed, as it was when they were taken entirely away. He had no difficulty in getting children into his first school, without any power at all but that which he chose to exercise. He sent the police out on the Monday morning and told them to bring in all the destitute children found in the streets, and he had them washed and dressed, and fed and taught, being only too glad to get them into school at all; and in like manner he would either assume the power or obtain the power to clear the streets of all towns.

Lord HOUGHTON did not think it necessarily followed that others could carry on these industrial day schools with satisfaction because beneficial results had been attained under the peculiarly favourable circumstances due to the personal supervision of Miss Carpenter and Sheriff Watson at Bristol and Aberdeen. They might be established in some cases where School Boards felt them to be necessary and desirable; but he foresaw extreme difficulties in the worst parts of London and in the manufacturing towns in offering a temptation to parents to evade their moral responsibility to support their children. As president of the reformatory at Red Hill he must confirm everything Mr. Baker

had said as to the futility of attempting to recover money from parents. It was quite right to lay down the principle, and to enforce it as far as we could. The advisability of sending a child home at night might depend, to some extent, upon the locality. There was a good deal in the homes of Scotland that would make the practice admissible, but the same conditions would not be found in the large manufacturing towns of England. In Scotland there was a humble domesticity, exerting influences which were not so manifest in other parts of the world. That being so, the system might be adopted in Scotland with advantage, as it had been under the able superintendence of Mr. Sheriff Watson; but he should like Miss Carpenter to say whether in her own experience she had not detected abuses, and whether, also, children had not been sent back to squalid homes from which she would rather have kept them away. Perhaps it would be found that a combination of the two systems would be most advantageous, the authorities exercising discretion in deciding whether a child should sleep at its home, and the negligent parents being as a rule denied any voice in the matter.

The CHAIRMAN (Mr. Hastings) asked whether the establishment of the Aberdeen day schools had the effect of tempting parents to neglect their children with the view of getting them into the schools?

Mr. Sheriff WATSON said the police had instructions to bring in all begging children, but, after a time, it was found that improper admissions had been made. Then there was appointed a committee to inquire into the character and condition of the parents. If they were found to be dissipated and dissolute, their children were refused as improperly admitted; but the children of the poor, the indigent, and the infirm were freely admitted.

Mr. C. J. RIBTON-TURNER (London) said that London magistrates were unwilling to commit parents to prison for having failed to pay what was due to the maintenance of their children, simply because that would be equivalent to doubling the charge on the rates; the child would have to be paid for by the local authority, and the father would have to be supported by the State while he was in prison. He could not quite agree with Miss Carpenter; he did not think the 16th clause had been sufficiently put into practice. His experience taught him that parents were too apt to waste their money on Saint Saturday and Saint Monday, and then to plead when summoned before the magistrates that they were out of money or out of work, the truth being they had never attempted to make any provision for the contingency of their being out of work. The difficulty could be overcome only by authorising the magistrates to attach the wages that were payable by the employer. [It was remarked that that was Miss Carpenter's suggestion.] He should like to see it enforced in the case of children sent to industrial schools. He was afraid, however, the suggestion would not meet the case of such children as were taken off the streets in London one Sunday turning 'wheels' for money. When they were got into the police cells, it was found that the majority were attending School Board schools, and that their parents sent them out for this industrial training on the Sunday. He feared the system of day feeding would not meet such cases. London was a vortex into which were whirled many from

the worst parts of the country. Last year, in a particular district of London, 191 persons applied for charity, and only thirty of them were born in the district, and five-sixths of them came from other parts of the country; only two came from Scotland; several came from Ireland; and the greater part of the majority came from different parts of England. With every disposition to try Miss Carpenter's proposal, he should wish first to see the existing compulsory powers with regard to industrial schools fully and efficiently tried, and parents made to feel responsible for the children that were taken off their hands. It was surprising how much parents understated their actual earnings. If an employer were ordered to pay, it would be ascertained what a man's wages were, and the amount due from him would be ascertained before it passed into his hands.

Mr. William Kidston (Ferniegair, Dumbarton) said his own impression was that only a small proportion of the class of children contemplated could be sent to day industrial schools, because the majority must be separated from their parents. It had been the ruin of some of those who had been in the existing industrial schools that on leaving them they were allowed to return to the homes and haunts of their parents. At the same time he admitted that there were cases, such as those of widows struggling hard with poverty, in which the day feeding schools would be of advantage.

The Chairman said there were two questions involved — first, whether there was a class of children to which such schools were applicable; and second, if there were, whether this was the best way of dealing with them. His experience went strongly to support Miss Carpenter in the view that there did exist such a class, and that it must be dealt with in some such way. He had not any experience in a town of any magnitude, but in his rural district there had been brought under his notice a certain number of cases in which it was extremely difficult to say what ought to be done with a child. He had been called upon to deal with more than one case which was not a fit one for a certified industrial school, still less for a reformatory or a prison. In reply to the question whether, under the 16th section, a child could be sent to a certified industrial school, he would state he had been obliged repeatedly to say, 'If the parent is willing to come before me and make a declaration on oath that he is unable to control a child, and will pay 3*s.* 6*d.* a week or whatever sum is required for its maintenance, I will make an order;' and the answer usually was that the conditions could not be complied with. He could only reply that the child was not qualified, and as the only way to qualify it was to let it fall into crime, no magistrate was prepared to recommend that that qualification should be sought. In the City of Worcester, with a population of 30,000, the School Board, of which he was chairman, had exercised compulsory powers for a year, and 600 children who did not previously attend schools had been brought into them, and if that could be done in a small town, surely there was much of the same kind of work to be done in a larger place. But his experience suggested that, when we had done all that could be done under the compulsory powers of the Education Act, and when we had applied the beneficial amendment

which enabled the Guardians of the Poor to pay fees for the children of those who were receiving out-door relief, there would still be considerable difficulty with regard to many children in obtaining, he would not say their regular attendance, but really any attendance which was of the smallest use either in furthering their education or keeping them out of evil and mischief. At that time there were many children within the jurisdiction of his own School Board to whom these remarks would apply, and he was at his wits' end to know what the School Board could do for such children under the present Elementary Education Act. There were only two courses which could be followed. One was to take the child before a magistrate and get it sentenced to a certain term of detention in an industrial school. This was possible if the child were qualified; but it was incurring an amount of expense, and burdening the ratepayers or the imperial revenue to a degree which was not justifiable if the case could be met in a cheaper and more convenient way. The question now raised was whether the schools suggested by Miss Carpenter would do the work. He had been struck by the Aberdeen experience of Sheriff Watson, who admitted that there was a danger in the operation of such schools, which was, that for the sake of admittance children might be sent upon the streets who would not otherwise go there. That was a danger to be guarded against, and the only way in which it could be was that adopted by Sheriff Watson—the enforcement of rigid and vigilant supervision on the admission of children. This was already carried out by the School Boards in regard to the remission of fees. Agents were employed, and committees appointed by the Boards, to test the need of parents who alleged that they could not afford to pay school fees. If this could be done under the present Act, it could be done under the same agency for Miss Carpenter's suggested schools. There must be power to inquire into the circumstances of the parents, and to take care that no child was admitted unless it was impossible for the parent to supply it with food.

Mr. Whitwill remarked that Sheriff Watson said he excluded the children of dissolute parents; what, then, did he propose to do with them? [Sheriff Watson said he would propose to send them to a certified school.] His opinion was we had no right by law to separate parent and child unless the parent was known to be unfit to have the child, therefore he should be scrupulous about separating them; but there were certain dissolute parents who were really so bad that he would not hesitate to take their children from them. There were a number of parents who were in a position to give their children nightly accommodation, and the return of the children from the school had a beneficial influence upon the parents and their homes.

Miss Carpenter said the objections to her scheme arose from misunderstanding. She did not undervalue certified industrial schools, but began by testifying to their importance. She admitted it was an enormous boon that some children should be removed from their homes in order to receive a thoroughly good training. She could not perceive that Mr. Barwick Baker differed from her in any way. Before the passing of the Industrial Schools Act she urged all she could that

the collection of payments from parents should be left to the Guardians; but Sir Charles Adderley said that would imperil the Bill. The sum obtained from parents was very small, and it was right and natural Mr. Turner should grumble that it was less in proportion than he obtained from the parents of children in reformatories. One reason no doubt was, that a large proportion of the children in certified industrial schools were orphans, while many of the children in reformatories had parents who were accessible. If any improvement were needed in the way of getting in the money, suggestions might be offered to Mr. Turner, who would perhaps bring the matter before the Government, to whom it was due, and to whom people were not over-anxious to pay it. She quite agreed with what Mr. Baker said about the police as collectors; they would naturally commiserate those from whom they had to collect it. In the case of day industrial schools, however, every penny obtained from the parent would go in relief, and the rates and the ratepayers would have a direct influence in obtaining the contributions due from a drunken parent. A Board would appoint its own collectors; in this case the interest of the ratepayers would be identified with the general object, and they would devise the best means of getting the money. She knew of one case in which a man who had earned good wages had three boys in three different certified industrial schools; and when the School Board officers found his two younger sons in the street, and said they must go to school, the man begged that they might be sent to industrial schools. The magistrates declined to commit them. They had previously been in a day industrial school, to which they went of their own free will. The Committee then said, 'We shall be encouraging an idle man by feeding his boys;' and she replied, 'We as a Committee are not to discuss whether we shall punish the parents, but whether we shall save the children;' but she added, 'I would gladly punish both parents if I could.' In such cases as Mr. Whitwill had mentioned she would send children to certified industrial schools; and she would not use them less than they were used now for proper cases. Outside them there were others that were still beyond the reach of School Board action, and the question was, what was to be done in them? The country would not tolerate the lowering of the standards in workhouse and elementary schools, so that these cases must be separately dealt with. That being clearly understood, she was anxious to rescue the child from the control of the Secretary of State, to keep parental power intact, and to place children under School Boards. Then, if parents are not deprived of their power over their children, as soon as they represented to the Board that they were in a position to send them regularly to school, and as soon as they preferred to provide for their children instead of paying a shilling or two a week for their maintenance at school, they might be released from the obligation to send them to a day industrial school, and permitted to select an ordinary Board school. Under her plan the Board would be able to grant the parents such a release. It did not interfere with the liberty of the parent, nor did it put a premium on neglect, because her experience was that careless parents did not like their children to

be taken away absolutely for ten hours a day, but liked to have them at their beck and call. At any rate, a school which would accommodate 200, which had refused no applicants, and in which the children were fed, had only sixty in attendance; and it did not seem from that there was much risk of encouraging negligent parents. She did not advise that the work should be done through the Committee of Council, because that might keep back the educational system of the country, for probably these children, for want of training, could only be got to pass the first three standards. If they were not pauper children, and were not fit for a Board school, they should be compelled to attend one of these day industrial schools instead of being allowed to run about the streets. She did not wish to bring them under the inspection of reformatory school inspectors, and she wished to keep them aloof from the Secretary of State, and entirely under School Boards elected by the ratepayers. She suggested inspection by the Poor-law inspector simply because they were used to this class of children; but she did not wish to lay any stress upon that. She hoped, at least, that the matter would receive careful consideration, and that the Council of the Association would take action upon it; and if they did, she knew from past experience that it would not be long before it was taken up by Government and by Parliament.

CUMULATIVE SENTENCES.

How far should previous Convictions be taken into account in sentencing Criminals? By Mr. Serjeant Cox.

WITH all deference to those who hold that criminals are 'society's failures,' and to whom, therefore, the community owes a debt to be paid, not by punishment, but by restraint with a view to reformation, I must still maintain that the primary object of criminal jurisprudence is to deter from the commission of crime through fear of the punishment that will follow it. Thus viewed, that object is twofold—First, to prevent those who are not yet criminals from becoming so; secondly, to deter those who have committed crime from repeating the offence.

The reformation of the criminal is entirely a secondary object and is properly the work of the priest and the schoolmaster. It is economy to make schools of our gaols, and there to inculcate notions of religion and morality. But it is a benevolence superadded upon a duty, and must be made subsidiary only to the primary purpose—punishment.

Assuming, then, the criminal law and its sentences to be designed for the terror of evil doers, the question of cumulative punishments becomes very simple as a principle, although

requiring some care in its application. No law could so define the gradations of criminality as to award to each its proper penalty. The law can but make a more or less rude classification of offences, affix to each class certain kinds of punishment, and leave to the discretion of the judge the meting out of the quantity of that particular punishment, according to his view of the character of the particular crime. Two crimes bearing the same title, and equal in magnitude in the eye of the law, might differ, as respects the guiltiness of the offender, to an extent far greater that the difference between a crime of one class and a crime of another class. Too large a latitude cannot, therefore, be permitted to the judge for the apportionment in the particular case of the degree of that punishment which the law prescribes for an offence of that kind.

A first offence, unless it possesses some special features of aggravation, is usually and properly treated with leniency, in the expectation, which experience has not disappointed, that the pain suffered will deter the sufferer from hazarding a repetition of his offence. But this deterrent will obviously operate with vastly greater force if it is known to the criminal that a second offence will certainly entail a much more severe penalty. A few crimes are the consequences of unbridled passions, and over them the fear of consequences has little sway. But the vast majority of crimes are committed to gratify some self-indulgence; the impulse is for the most part momentary, and in many cases the fear of the pain that may follow the crime, is likely to be weighed in the balance against the pleasure of the indulgence to be obtained by it. There is another class of crime over which punishment that is painful is likely to exercise much restraint. All crimes of fraud, or in the nature of fraud, the form that, with the spread of education, crime is assuming more and more, are from their nature *deliberate* crimes. They demand contrivance, skill, forethought, and much ingenuity for their accomplishment. The criminals are necessarily possessed of a considerable amount of intellectual capacity. These are crimes of calculation. The chances of success are weighed against the chances of detection and the unpleasantness of the penalty, and the balance is struck of probable gain or loss. But this balance is materially affected by knowledge of the amount of punishment involved in failure. Our laws, framed when society was very differently constructed, when education was less general, when the temptations were not so great and the facilities not so numerous, have created crimes of fraud as if of lesser degree of criminality than larcency, and given to them

not only a milder name, but lesser punishments and more chances of escape. The penalty for crimes of this class should be imposed with reference to the question such a deliberate criminal always puts to himself, 'Is it worth the risk?'

But if it is desirable that the punishment of first offences should be light, it follows that sentences must be *cumulative.* If all sentences are to be equal, the first sentence must be made more severe. If the object be to deter by fear of consequences, surely the knowledge that he will have to endure so much more than he has suffered already will deter the offender if anything can. It has been said that, in fact, cumulative sentences do not deter, because we find so many offenders coming back again to the gaols in spite of them. But this is the same fallacy which has already been pressed into service against the contention that the object of punishment is to deter. We know all whom punishment has failed to frighten; we do *not* know those who have been prevented by fear of the punishment from indulging their desires by criminal acts. So it is with cumulative punishments. We see those who disregard them. Is it not more than probable that of the vastly greater numbers who do not again lapse into crime a large proportion are prevented by a feeling that might be thus expressed: 'I know what it is to be a prisoner for two months; I will not risk enduring the like pain for six months.'

Cumulative sentences for repeated offences would, therefore, appear to be unexceptionable in principle, and there is no proof that, so far as their limited application has gone, they have failed in practice. But the application of the principle is not uniform, and it is wholly neglected in some offences that especially call for it.

When the law attaches a penalty to an offence, it should in all cases specify the punishment for a second conviction for the same offence, with the general conclusion that for a third, or any subsequent, conviction the punishment will be increased according to an appointed scale, still leaving to the judge a discretion in its apportionment, in order to meet the infinite variety of circumstances that should determine the degrees of culpability, which differ as infinitely. It is not of infrequent occurrence that a person who has been several times convicted and subjected to penal servitude commits some offence of a very trivial nature, for which, had it been a first offence, he would have been subjected to imprisonment for a month. Although it is necessary to take his former convictions into account in the sentence, the proposition often advanced that

he should invariably receive a punishment greater than either of his previous ones, does not commend itself to the judgment, for that would be equivalent to a still longer term of penal servitude than his former one. The complaint is not of the power to relax the rule as to cumulative sentences for repeated offences—for that is indispensable to the administration of criminal justice—but to the capricious irregularity with which the principle is established by the law and adopted by those who administer it. In very few cases, indeed, are cumulative penalties *prescribed* by statute for second and subsequent convictions for the same offence. With felonies, a former conviction may be charged and proved, and in such case, however small the punishment attached to the offence, the judge may sentence the prisoner to a long term of penal servitude, and not to a shorter one, which is another grave error. The law is defective, also, in this—that it does not attach the cumulative punishment directly in the same section that specifies the punishment for the particular crime; but it appears only as a general provision in another place, and therefore is not brought so directly under the notice of the criminal class as it would if the provision were to follow as part of the penalty affixed to the particular crime. For instance, in the law that punishes larcency, after defining the offence, the punishment should be expressly stated as, for the first offence so much, for the second offence so much, for the third and all subsequent offences a proportionate addition of so much more for each new offence. A subsequent section might contain a general power to the judge to mitigate any of the sentences at his discretion. Cumulative punishment being thus imposed directly, the general rule would be to observe it, and the rule would be departed from in exceptional cases only. A further advantage would result in that the judge would be obliged to have, if not to give, good reasons for exceptional departure from the rule. But it is with offences punishable by summary conviction that the law most requires amendment in this respect. Cumulative penalties are recognised for some such offences, but only for a small portion of them. Even when the law is adopted it is imperfectly carried out. It is rarely extended beyond a second conviction. If the principle be a right one, it should be persistently applied. If a second offence is to be visited with double the punishment awarded to the first, there is no conceivable reason why a fifth or sixth offence should not be punished with five or six times the penalty inflicted for the first. On the contrary, if any distinction is to be made, if repetition of crime aggravates the guilt of the offender, his

persistency, after repeated warnings, increases the wrong *more* than the ratio of the repetitions. Instead of merely a penalty —say of twenty shillings for a first offence, and of forty shillings (or whatever it may be) for a second or any subsequent offence—as is the usual provision, there should be a measured scale of increased penalty for subsequent offences (as already suggested for indictable offences), with, of course, the same discretion given to the magistrate to reduce or remit, as is suggested for the judges. The existence of such a scale would be a guide to justices in the duty (often most delicate) of determining the amount of punishment; for it would give them a measure by which they could at once relieve their own minds and justify themselves when subjected to the opposite fires of criticism—from one side for their leniency, and from the other side for their severity. Such a scale would not be difficult of adjustment, and, as with indictable offences, the cumulative penalties should be distinctly stated in the section of the statute that defines the offence, so that offenders may distinctly know what will be the consequences if they repeat their misbehaviour.

There are whole classes of offences which the irrational and now unmeaning distinction made by our law between felonies and midemeanors has continued to except from the category of *crime*, although in fact the moral guilt is much greater than that of many offences called felonies, and therefore so treated. Such, for instance, is that now large category of offences which may be properly described as 'frauds.' A man who deliberately and habitually loads a scale is morally and socially a far worse criminal than a boy who steals a loaf or picks a pocket. But owing to the legal distinction, now no longer necessary, between felony and misdemeanor, the fraud is treated with far less severity than the larceny, although that fraud was not the commission of one crime merely, but in fact an accumulation of many crimes. No greater service could be rendered to the community by a Government desirous of practical reform, than the revision and reconstruction of the whole law of *fraud*, adapting it to the present state of society, where the diffusion of education has caused crimes of contrivance to be substituted for crimes of violence. But if it be deemed too large a work for one statute, no time should be lost in so far amending the present law as to introduce a scale of cumulative penalties for offences already punishable. Take, for instance, the offence of fraud by weights and measures. How inadequate is a penalty of 5*l.* for an offence by which tenfold that sum has been pocketed by the offender? All offences in the

nature of fraud, by which profit is made, should be punished, at the least, by a pecuniary penalty that will exceed the profit, so as to make the fraud an *unprofitable* pursuit. Repetition of the offence should invariably involve a greatly increased penalty, regularly accumulating with every subsequent conviction. There are many other offences, too numerous to be named, but familiar to all acquainted with the business of magistrates' courts (such as misbehaviour of various kinds, disorderly drunkenness, wanton or malicious injuries to property, assaults, petty trespasses, and the like), which would certainly show a great and immediate diminution, if it were known that continuance in the wrong doing would *proportionately* multiply the punishment to be endured.

A special advantage of cumulative punishments is that they work in the most certain manner by a species of self-regulation. The criminal in fact apportions his own remedy to his own wrong. There must be some point at which he will reform himself, otherwise he will practically pass altogether into the custody of the law. If two months' imprisonment will not suffice for a remedy, three, or four, or six, or more, being successively applied *by his own act*, it is for him to determine when he has had enough. At the worst, if he has so little self-restraint that he cannot abstain from an hour's self-indulgence to avoid six months in a gaol, the society to which he is a nuisance takes possession of him and compels him to good behaviour by depriving him of the means for wrong-doing. If the penalty is pecuniary and he is imprisoned because he cannot pay, his imprisonment should only be remitted when he has worked out the amount. Thus his fate would be entirely in his own hands. The substance then of this paper resolves itself into the following propositions:—

1. The object of punishment is, first, to deter the offender from repeating the offence by fear of the consequences; secondly, to deter others from offending by the knowledge of the pain they will incur if they do so.

2. For this purpose the law should affix to all offences, below a certain high class of crime, a scale of penalties increasing at a fixed ratio with every repetition of the same offence.

3. The law should also impose some increase of sentence upon a conviction for any offence of the same nature, as, for instance—in larceny, for any crime in the nature of dishonesty; in assault, for any offence involving violence, and so forth.

4. In all cases there should be vested in the court a large discretion for mitigation of punishment, and here I would suggest whether it would not be desirable to make some

change in the present practice of sentences, so as to require the judge to say to this effect: 'I now pronounce the sentence of the law, which for your offence is (naming the statutory penalty). But by virtue of the power given to me to mitigate that sentence, for the reasons I now state to you, I reduce your punishment for that offence to,' &c. Much benefit would accrue from such a repeated publication of the punishment attached by the law to offences, and no small advantage would be secured by the judge being thus required to state publicly his reasons for its mitigation.

5. One of the strongest recommendations for the adoption of a scale of cumulative punishments is that it precisely apportions the remedy to the disease.

On the same. By ALEXANDER M'CALL, Chief-Constable of Glasgow.

AT the Meeting of the Association held in Glasgow in 1860, my predecessor in office, the late Mr. James Smart, read a paper on the state of crime in the City of Glasgow.* In that paper he took a retrospective view of the crime of the city from the end of the year 1859 to the beginning of the year 1860, and concluded that 'crime in Glasgow is not on the increase,' and enforced that conclusion by stating that the statistical tables he then furnished showed that the total number of prisoners brought before the magistrates of Glasgow charged with crime in 1850 was 3,472, while in 1859, notwithstanding the increase in population, it had only increased to 3,493.

The population within the municipality of Glasgow in 1861 was 403,000 according to the census then taken, while at the census of 1871 it was 490,442, and at the present time may safely be stated as at least 525,000.

From the accompanying tables showing the state of crime from the year 1860 to the close of the year 1873, both inclusive, I submit with deference that I am not only justified in making the same remark as my predecessor for the period over which his review extended, that 'crime in Glasgow is not on the increase;' but further that, considering the increase in population, crime in Glasgow is, and has been, upon the decrease.

It will be gathered from Table A that the total number of reports of crime in the year 1860 amounted to 5,958, the apprehensions to 3,817, and the convictions to 1,863. A gradual

* See *Transactions*, 1860, p. 452.

increase followed from that year till 1867, when the reports showed the highest number over the statistical periods embraced within my own or my predecessor's paper. The number of reports of crime in 1867 was 10,899, of apprehensions 5,042, being a percentage of 46·2 to the number of reports, and of convictions 2,975, being a percentage of 27·2 to the number of reports. In the year 1870 a marked diminution in the reports of crime took place. Contrasted with 1867 the decrease in the number was 2,197. In the year 1871 there was a decrease in the number of reports over the preceding year of 1,181. In 1872 there was, however, an increase of 425, but last year (1873) showed a decrease of 77 over the preceding year, and a decrease of no less than 3,030 over the year 1867. While such a large decrease took place in the number of reports in 1870, it is interesting to observe that the number of apprehensions in that year exceeded those of 1867 by 35, being an increase of 12·1 in the percentage of apprehensions to reports, and the convictions by 25, being an increase of 7·2 in the percentage of convictions to reports, showing, I think, that the certainty of detection and punishment had considerably improved. It is also noteworthy that the increased percentage of apprehensions and convictions to the number of reports does not appear to have been temporary, for again in 1873, contrasted with 1867, the number of apprehensions had increased by 749, being an increase of 27·5 in the percentage of apprehensions to reports, and the convictions by 551, being an increase of 17·6 in the percentage of convictions to reports. It is further satisfactory to notice that crimes against the person have been since 1867 of a comparatively mild type, and those against property, whether viewed in relation to the *modus operandi* or to the value of the property abstracted, have not presented features of an alarming or of a very grievous character. From these facts I think I am justified in repeating that crime has not increased, but taking into account the increase of population, has positively and materially decreased.

In the Annual Reports upon the state of crime submitted by me to the magistrates of the city at the close of every year, I have given my opinion from time to time upon the causes which probably led to the fluctuation of crime, or to its increase or decrease. In the Report of 1871 it was stated that a number of causes and circumstances had contributed to the improved results shown by the statistics of that year:—

I. That the criminal legislation for some time past had forced upon the minds of the criminal population the wholesome conviction that society had resolved to protect itself and

its interests more effectually than heretofore, and had determined that the way of the transgressor should be hard.

II. That sentences had been imposed with undeviating certainty, and rigidly enforced with unbending discipline. That the sentimental treatment pursued in the convict prisons at one period had been displaced by a rationally severe and deterrent punishment; and, as a consequence, many of those who had returned to the city on license reverted to their incarceration with dread, and contemplated the possibility of its recurrence with salutary apprehension.

III. The important and beneficial results exercised by the Industrial and Reformatory Schools Acts, by snatching from incipient vice hundreds of young arabs in town and country.

IV. The vigorous action taken by the magistrates and police in the year 1870 and subsequently for the suppression of street prostitution and brothel-keeping. In proof that this conduced to the diminution of crime, it will be observed from the Table B that the number of thefts by prostitutes in 1860 was 401; in 1867, 554; and in 1873, 256. The number of thefts in brothels in 1860 was 125; in 1867, 638; and in 1873, 8. The number of brothels in Glasgow in 1869 was 211; in 1870, 204; in 1871, 79; in 1872, 50; and in 1873, 20. The rental of the brothels referred to in the year 1870 was 1,975*l.* 8*s.*, while in 1873 the total rental amounted to 202*l.* 5*s.*

V. The operations of the City Improvement Trustees and the directors of the City Union Railway had also tended to the results narrated. Through these operations the city had been cleared of the foulest dens of crime and profligacy, and their occupants scattered amongst a population breathing a purer moral atmosphere, and thereby affording facilities to the police for bringing the vicious to justice more easily and certainly than when the whole formed a concentrated and combined colony of criminality and rascalism.

I still hold these opinions, and feel satisfied that they are justified by the facts and the tables submitted by me, and I have no hesitation in suggesting that the action and legislation, as regard the confirmed criminal classes, should be in the direction it has been for the last few years. Since the last meeting of Congress in Glasgow, two important measures affecting these classes have been passed, viz., the Penal Servitude Act, 1864, and the Prevention of Crimes Act, 1871. Both have wrought satisfactorily upon the whole, and have contributed to the suppression and reduction of crime. The latter, in three of its sections, in my opinion, is capable of amendment and improvement.

Under section 7 of the Act, the courts have held in Glasgow that a person accused under this section must have been twice previously convicted before the Circuit Court to subject him to the provisions of the section. One previous conviction before the Circuit, and at most a conviction for crime before any other Court, should be sufficient.

Under section 10 the courts have held that the provisions of the section are not applicable to common lodging-houses or lodging-houses of any description, unless these are licensed for the sale of intoxicating liquors. No houses of that description exist in Glasgow, and to make the provisions of this section to apply to common lodging-houses would be of very great importance.

Under section 15 the word 'frequenting' should be supplemented by the words 'or found,' immediately before the words 'river and canal,' as the courts have held the Procurator Fiscal must establish that an habitual criminal must have been in the habit or practice of going about such places before the provisions of this section can be applied to him. It should also be added that such person might be apprehended and taken before the magistrate without warrant, as at present the police are not justified in apprehending without first having obtained a warrant. Under the Summary Procedure Act, 1864, and which by section 17 is the only mode of procedure under the Prevention of Crimes Act, the only course for bringing before a magistrate any person is by citation or by apprehension under a warrant. It can easily be conceived that such a mode of procedure would be very ineffective against rogues and vagabonds frequenting public places with intent to commit crime.

Legislation of this kind appears to me, from observation and experience, to be of a healthy character, and more likely to have a tendency to the suppression of crime and the reformation of the criminal than the sentimental treatment already referred to. When a man has fairly and fully cut himself loose from all moral restraint, and abandoned himself to a life of habitual crime, reformation is both difficult and rare. The measure of repression should, therefore, be such as to relieve society as much as possible of his presence, and when he is at large of subjecting him to such surveillance as will render any criminal act almost an impossibility; in short, such as to convince him sternly that 'honesty is the best policy,' and that it is more profitable, and attended with greater comfort, to work for his livelihood than to plunder and steal.

Table A, showing the number of Crimes committed in the city of Glasgow reported to the Police, the number of Persons apprehended, and the number convicted, during the years 1860 to 1873, both inclusive.

Years	Offences against the Person			Offences against Property committed with Violence			Offences against Property committed without Violence			Malicious Mischief			Forgery and Offences against the Currency			Miscellaneous			Totals		
	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions	Reports	Apprehensions	Convictions
1860	78	119	69	487	241	74	5316	3346	1637	58	87	75	19	24	8	...	...	...	5958	3817	1863
1861	51	62	35	520	237	65	5805	3835	1709	67	99	87	33	44	17	1	1	1	6477	4278	1914
1862	63	93	53	473	190	87	5915	4077	1778	77	115	89	21	24	18	3	5	4	6552	4504	2029
1863	76	111	58	457	189	78	6805	4423	2034	105	162	129	26	29	13	...	...	...	7469	4914	2312
1864	87	111	54	537	208	103	8126	4834	2257	98	156	126	23	28	9	2	3	1	8873	5340	2550
1865	70	108	36	420	134	63	8219	4601	2077	184	343	266	24	30	12	...	...	...	8917	5216	2454
1866	73	85	59	387	88	71	8870	4036	2154	176	327	271	10	18	5	1	1	1	9517	4555	2561
1867	79	96	51	551	162	84	10,062	4393	2514	194	369	316	11	18	10	2	4	...	10,899	5042	2975
1868	90	117	76	601	204	143	9715	4068	2493	164	302	261	22	32	21	2	3	2	10,594	4726	2996
1869	97	109	79	443	219	139	8640	4449	2516	202	436	387	11	14	9	1	1	1	9394	5228	3122
1870	109	125	77	459	203	136	7877	4317	2425	224	401	344	28	26	14	5	5	4	8702	5077	3000
1871	105	120	63	390	176	121	6793	4309	2333	215	419	348	13	16	5	5	6	2	7521	5046	2872
1872	130	142	83	849	154	109	6748	4576	2591	206	399	332	9	12	10	4	4	3	7946	5287	3128
1873	117	124	78	730	197	136	6830	5142	3038	176	310	263	10	12	8	6	6	3	7869	5791	3526

Table B, *showing the number of Thefts reported to the Police as having been committed in the city of Glasgow during the years* 1860 *to* 1873, *both inclusive; also the amount of Money and estimated value of Property stolen and recovered during same years.*

Class of Reports	Number of Reports in each Year													
	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873
Thefts by prostitutes . .	401	449	474	467	569	574	578	554	538	463	332	259	188	256
,, in brothels . . .	125	170	169	264	302	340	405	638	708	683	475	199	39	8
,, from intoxicated persons .	284	291	284	330	397	472	642	803	877	817	738	641	707	908
,, by picking pockets .	517	485	420	582	562	645	853	788	809	767	766	464	409	216
,, ,, child stripping .	118	180	99	180	196	155	261	289	239	303	177	217	96	110
,, ,, shop lifting . .	288	357	380	398	459	443	434	545	572	439	364	327	215	115
,, of goods exposed for sale	131	130	141	96	70	81	125	115	90	101	94	122	146	128
,, from new buildings .	97	140	118	84	118	156	183	147	194	112	92	134	149	270
,, by lodgers . . .	98	152	161	167	186	182	160	155	122	135	120	95	260	300
,, ,, by doors being left open and insecure .	1717	1776	1710	1966	2417	2624	2514	2849	2668	2256	2331	2034	1620	494
,, from carts and carriages	46	70	135	75	121	115	112	134	96	86	103	43	32	34
,, by domestic servants .	53	50	33	43	59	66	86	53	33	40	50	52	86	61
,, ,, shopmen and clerks .	25	15	23	19	25	17	18	23	26	28	31	26	24	8
,, ,, various means from miscellaneous places	1047	1207	1377	1710	2090	1876	1946	2297	2194	1891	1661	1620	2187	3413
Total reports in each year .	4947	5472	5524	6381	7571	7746	8317	9480	9166	8121	7334	6233	6158	6321
	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Amount of money and estimated value of property stolen by all means . .	10,631	10,243	10,237	9801	12,117	11,416	18,262	19,422	15,826	16,826	22,804	11,292	10,974	10,882
Amount of money and estimated value of property recovered	3769	2530	2108	2313	2113	2452	2846	3103	3059	2622	10,913	3748	3471	3873

Table C, *showing the number of Juveniles apprehended in the city of Glasgow charged with Crimes committed therein during the years* 1860 *to* 1873, *both inclusive, and the number sent to the Reformatory and Industrial Schools after conviction.**

Year	Number apprehended			Sent to Reformatory Schools			Sent to Industrial Schools		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1860	230	77	307	...	...	...	...	...	...
1861	324	66	390	92	11	103	...	...	...
1862	204	73	277	63	21	84	...	...	...
1863	232	73	305	65	18	83	...	...	...
1864	231	60	291	69	20	89	...	...	...
1865	216	61	277	62	27	89	...	...	...
1866	195	57	252	76	18	94	...	...	...
1867	259	47	306	39	12	51	7	3	10
1868	287	62	349	45	7	52	23	3	26
1869	306	80	386	74	12	86	14	4	18
1870	248	61	309	58	12	70	28	3	31
1871	206	48	254	51	10	70	20	4	24
1872	302	66	368	49	14	63	16	4	20
1873	371	106	477	50	16	66	14	4	18

Table D, *showing the number of Persons apprehended in the city of Glasgow charged with Begging and being found Destitute during the years* 1860 *to* 1873, *both inclusive, with the number of Juveniles sent to the Industrial Schools.*

Year	Number apprehended			Sent to Industrial Schools		
	Male	Female	Total	Male	Female	Total
1860	183	146	329	...	...	...
1861	100	152	252	...	...	...
1862	97	188	285	...	...	...
1863	223	365	588	...	...	...
1864	136	178	314	...	...	...
1865	161	261	422	...	...	...
1866	145	120	265	73	41	114
1867	268	218	486	81	35	116
1868	290	294	584	70	29	99
1869	255	170	425	60	29	89
1870	169	141	310	31	17	48
1871	178	94	272	34	7	41
1872	181	53	334	26	8	34
1873	105	84	189	27	16	43

* The number of juveniles apprehended in 1860 was 307, and in 1873, 477; the excess of 170 on the latter year over the previous year was exceptionally large, and, in my opinion, was casual and temporary. The number of juveniles brought before the magistrates charged with crime, in 1854, the year in which the Reformatory and Industrial Schools Acts came into operation, was 833. The decrease is so marked and decided as to justify the conclusion that the improvement is due to the operation of these Acts. The number sent to the Reformatory

Table E, *showing the number of Persons apprehended in the city of Glasgow charged with Petty Assaults, with being Drunk and Disorderly, and with being Drunk and Incapable, during the years* 1860 *to* 1873, *both inclusive.**

Year	Brought before the Magistrates	Discharged by Officer on duty in Police Office	Total
1860	12,800	27,419	40,219
1861	10,952	26,352	37,304
1862	10,304	27,743	38,047
1863	12,493	27,349	39,842
1864	16,436	24,504	40,940
1865	17,436	24,518	41,954
1866	17,193	23,373	40,566
1867	16,596	22,033	38,629
1868	17,441	22,602	40,043
1869	20,985	25,912	46,897
1870	22,743	26,759	49,502
1871	22,438	27,258	49,696
1872	25,250	29,196	54,446
1873	26,247	29,963	56,210

School since 1861 has decreased from 103 in that year to 66 in 1873. The number of juveniles sent to the Industrial School since 1867 has increased from 10 in that year to 18 in last year.

In considering these statistics it will be proper to keep in view that the Industrial Schools Act of 1866 first empowered the magistrates to send juveniles under 12 years of age to the Industrial Schools who had been apprehended and charged with crime for the first time.

* Between the years 1860 and 1868 the numbers annually apprehended for the offences mentioned in this table stood very much the same, so that the increase has taken place during the last five years, and chiefly during the last four years. I attribute this to the great and sudden increase that has taken place in the wages of the labouring classes within these years, without a corresponding increase of wisdom and training on their part to guide them in the judicious spending of the means the prosperity of the trade of the country had thrown upon their hands.

It must be kept in view, in dealing with this table, that the number of apprehensions therein recorded by no means represents the same number of different individuals. One person may figure several times during the year, as he has done in the past, and will probably continue to do in years to come. There is a numerous class of this description in the city, whose principal habitation is the cells of the police office and the prison. Any statistics, therefore, which include this class of offenders, are calculated to convey very erroneous impressions of the habits and conditions of the people at large. Legislation of some kind is urgently required to meet the case of the habitual drunkard.

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Mr. JOHN SMITH, Governor of Edinburgh Prison, read a paper on the subject, expressing the opinion, in answer to the question, that the previous conviction should be fully taken into account in sentencing criminals, whether the interest regarded was that of the criminal himself, society at large, or the associates of the criminal and the criminal class generally.

Mr. Smith pointed out that, where a prisoner has been previously convicted, it is obvious that previous sentences have not reformed him, and it is absurd to treat a man who is probably an expert criminal as one who is inexperienced. Such a man ought to be shut up for the safety of the lieges, as is a dangerous lunatic or a dangerous animal. Time is necessary to reform such a man and complete his moral cure, quoting in support of this opinion the following extract from the work of Mr. Frederic Hill, 'On Crime; its Causes and Remedies,' p. 149:—

'Even, however, without view to the amendment of the criminal, and if it were resolved that mere punishment should be thought of in our laws, and that its quantity should be proportioned to the offences, I maintain that the natural consequences of crime, in the withdrawal of the offender from the privilege of mixing with society which he has abused, and his confinement until he can be safely restored, more fully carries out this principle of punishment than almost any other plan that could be proposed; for in proportion to the length of the habits of crime and heinousness of the offences committed would, in general, be the period necessary for effecting a cure, and consequently the duration and amount of the punishment.'

Mr. Smith urged that, whilst the necessity of the principle of cumulative punishments had been fully recognised, it had only been partially carried out, and so in many cases no lasting reformation was promoted, stating that prisoners had frequently told him that they had never begun to think of their career till condemned to a long sentence. Short sentences, moreover, not only remove the natural dread of a prison, but inure and train prisoners to bear its severity. A moderately long sentence on a first conviction produces a deterring influence, as shown by the statistics attached to Mr. Smith's paper, since, of 166 prisoners committed for the first time and sentenced to periods of imprisonment of six months and upwards, three years afterwards there had been recommitted to prison not quite 20 per cent. of that number;

whereas, of 166 prisoners committed for the first time during the same period, and sentenced to periods of sixty days and under, there had, three years afterwards, been recommitted 50 per cent.

Mr. Smith further observed that, in order to realise the peculiarly vitiating effects of short and frequent imprisonments, whether on the juvenile or adult, we must remember the total absence, in the great majority of cases, of any opportunities of reformation during his intervals of liberty. Were there a vestige of such opportunities in what may be called his *out-door* experiences, did these experiences comprehend anything less compulsory in their many and great influences for evil, or were there a season for deliberation and choice—some debateable ground, as it were, between the restrictions of the prison and the seductions of society—his reiterated periods of restraint might wear a slight aspect of expediency; but nothing, absolutely nothing, intervenes between the liberation of the prisoner and his second, or it may be his twentieth, immersion in the atmosphere of moral pestilence, in which the seeds of vice have been previously planted and nourished. The transition is abrupt and immediate, and as if to shut more effectually every avenue of reformation, in very many, nay, in most cases, the criminal is waylaid on the day of his liberation by his former associates in vice, and tempted, or forcibly drawn, back to his old haunts, and to new and repeated violations of the law. Every light, indeed, thrown by the statistics of crime on the subject of recommitments, come from what quarter or fall in what direction it may, goes to prove the terrible facility and aptitude with which a course of short and repeated imprisonments harmonises with and aggravates a continued course of crime. *In* the prison there is experienced by the offender, and especially by the youthful one, the agitation and expectancy of approaching liberation, and renewed opportunities of vicious indulgence. *Out* of the prison there are the confirmation and encouragement of associates—renewed temptations, freshened and flavoured with novelty and concealment, and a wider distance and stronger exclusion from all that is honest, creditable, and good.

If sentences are not to be cumulative, but necessarily result in short and repeated imprisonments, he could scarcely conceive a greater public calamity. It will certainly give an impetus to serious crime. That there is some danger of the most hardened offenders being treated as if they had only made a lapse from rectitude, and committed their first offence, may be inferred from the statement of a case lately tried, as follows:—

The prisoner, twenty-five years of age, had already been previously convicted six times of theft, and the following sentences had been passed upon him:—On the three first convictions, sentences of sixty days each; on the fourth, sentence of nine months; on the fifth, eighteen months; on the sixth, seven years; and on the seventh, the learned Judge (ignoring all these convictions) awarded a sentence of six months! The prisoner, who stated that he fully expected ten years, was astonished and jubilant, and has stated that he could scarcely believe his own ears. It is easy to conceive the effect that such a sentence pronounced upon one whose whole life had been a career of crime would have on his associates. Certainly it would be anything but deterring.

In conclusion, he could have no hesitation in re-stating his opinion, founded on almost life-long experience of every phase of the subject, that, having regard alike to the real good of the prisoner and the best interests of society, previous convictions ought to be fully taken into account in sentencing criminals.

Table showing the previous Imprisonments in the Prison of Edinburgh of Criminal Prisoners committed during the year ended 31st December 1873.

	First time.	Once before.	Twice.	Three times.	Four times.	Five times.	Six times and under ten.	Ten times and under twenty.	Twenty times and under fifty.	Fifty times and upwards.	Total.
Males .	1283	531	207	124	70	49	75	93	23	21	2476
Females	443	380	199	125	94	76	208	431	375	202	2533
Total .	1726	911	406	249	164	125	283	524	398	223	5009

DISCUSSION.

Mr. Barwick Baker (Gloucester).—The question of cumulative punishment had been settled so far as the principle was concerned, and the only question was, how and to what degree it ought to be applied, how to make the best use of it, how far it was desirable that judge and justices should carry it out. The county of Gloucester acted in advance of any other county. The court of quarter sessions, aiming, not at absolute uniformity, but at unanimity, recommended to the justices that whenever a case of theft was brought before them, if it was a first offence, they should try it, if it was within their power, and give a very short

sentence, such as ten days. That sentence was really more severe than might at first sight appear; it did not give a man time to become habituated to, but it gave him a strong dislike for, a prison, which dislike was partly overcome by three months' imprisonment. From ten days to a month was therefore recommended for a first conviction. On a second conviction prisoners were usually sent to quarter sessions or assizes, and received usually, though not without exception, sentences of six months' imprisonment, and three, five, or seven years' police supervision. The latter, he believed, was a sentence not known in Scotland. It was introduced in England in 1859, but rather imperfectly, and the October of 1861 made the supervision more complete and systematic. He would recommend Scotchmen to consider whether they should not adopt the system. The question arose how the magistrates were to know that their conviction would be a second conviction of the prisoner. Forms were given out to the police, and at the time they apprehended any one they were bound to fill them up with all the information they could gain of the prisoner's character; and it was curious in how few cases the previous character of a prisoner could not be readily ascertained. If it were not a second conviction the prisoner was asked whether he was willing to state any reason why he should be tried summarily and have a short imprisonment. If he said he could refer to those who could speak to his conduct for four or five years, he was remanded for five or six days, and he was then brought up again. In the meantime the police went to inquire whether he was known, and in that way they got at nearly all the antecedents of a prisoner, and so enabled the magistrate to form a judgment as to whether the sentence should be ten days' imprisonment or six months' with police supervision. If a man were convicted a third time, he was almost certain to receive seven years' penal servitude; and that sentence was so far effective in putting a stop to crime. If a man knew that if he committed a second theft the chances were ten to one that he would be sent to gaol for six months, and that for the third offence he would be sentenced to penal servitude for seven years, those were contingencies he could fairly estimate, and each of them struck him as a bold and glaring fact which he did not like to face. If punishment were uncertain it was not half so deterrent as it would be if its infliction were made certain. The gradual increase of punishment, or cumulative punishment, as it was called, was lessening crime. Before the reformatory system began in England female crime had been on the increase for many years, and in 1856, the first year the system began to operate fairly over England, the number of young criminals had risen to 14,000. Up to that time it had been the custom to send a boy to prison three months for the first time, two months for the second, one month for the third, and three months for the fourth; and in 1859 there were loose in London 456 boys who had been convicted four times or oftener. He believed that now there would not be found in London forty boys who had been four times convicted. Of the 456 referred to, 160 had been convicted eight times or oftener, and were therefore desperate and hardened thieves. Of late years that class had ceased to exist. There were very few boys in his own reformatory who were

any trouble to manage. The reason of all this was that now, on a second conviction, a boy was sent to a reformatory. The plan being carried out all over England, there were no leaders in crime among boys, and there were no boys gradually rising in the scale, because there were none to teach them. Why should not the same principle be adopted in dealing with men? In eight years the number of juvenile criminals fell from 14,000 to 8,029, and to 6,000 in four years more; and since then the increase of crime by boys had scarcely kept pace with the increase of population. It might be said that the system of cumulation had saved us, after 14 years, from 6,000 convictions of children every year. The same might be done with men. If we could only get power to carry out the cumulative system as to small offences, such as drunkenness, disorderly conduct, assaults, and the like, and if we were able to give lengthened punishments for them, he believed the number of offences would be diminished by 60,000 per annum. He had little doubt that crime would be diminished to that extent by these means, but it was necessary first to lay down a distinct rule as to how far and how fast sentences should increase.

Mr. William Taylor, F.S.S. (London), whose special experience had been gained in the suburban county of Surrey, believed that cumulative punishments were essential for the good both of the criminal and of the country, and said that the system was carried out by complete gaol records and communication with the police. Legislation on the subject might be greatly improved if we could have a law officer of the Crown who would give some attention to it.

Mr. Ex-Bailie Lewis (Edinburgh) said that all who had come in contact with criminals, whether as police magistrates or judges, must be satisfied that, however it was to be accounted for, the punishment of crime had to a large extent lost its deterrent influence among the criminal population. While he made that remark, and approved most thoroughly of every principle propounded in the very admirable paper of Governor Smith, he questioned—in short, he demurred to the proposal to extend and to bring down with heavier pressure the operation of the Prevention of Crimes Act. He apprehended that criminals, after they had paid the penalty of their crime—after they had served their period of punishment and had been restored to society—were entitled to something at least like even-handed justice. Now, he submitted that the Prevention of Crimes Act was based upon a principle that did not admit of that. Having occupied the position of a police magistrate for many years, and having had to deal with thousands of criminals who came before the Police Court, he never felt called upon to administer that Act but with serious misgivings. When he found a criminal placed before him charged upon the evidence of two police officers with being in a certain position with an intent to commit crime, he felt it was asking him to do more than conscience would sometimes admit of to convict the accused. He might be an individual placed under suspicious circumstances—he might be the very worst of criminals—he might have undergone many sentences—his character might have been of the very worst; still it scarcely comported with the constitution of a free country to deal with a crime that

had never been committed. In short, to try to convict by anticipation was a very dangerous principle indeed, more especially when we found that the case rested on the evidence of two police officers. If we had citizens giving their evidence that they found the accused in certain circumstances where all the associations pointed to an attempt to commit crime, it might in some degree be defensible. It must be remembered that one's sensibilities were in some degree impaired by being, as police officers necessarily were—he made no reflection on them—continually brought in contact with crime. Under these circumstances he thought we ought to be exceedingly careful before we said anything that would encourage the Legislature to press the principle further than it was carried at the present time. He was struck with a remark on the paper of Captain M'Call. The captain started with the proposition, and it might be correct, that there was a marked diminution of crime. The returns he had submitted would appear to indicate that, but he was struck with the fact that the returns which Captain M'Call gave of drunken cases—drunk and incapable, he presumed—showed they had increased in ten or twelve years from 12,000 to something like 40,000. If it was the case that in a period of some ten or twelve years Glasgow exhibited an increase in the number of commitments from 12,000 to 40,000, it scarcely comported with the proposition that crime had greatly decreased. There might be an explanation. He observed one remark in regard to the 40,000, that they were commitments that came before the police. It was quite possible that there might have been a different principle of administration applied during later years, and if so that explanation should be given; because if it was true that a discretionary power was vested in the police to deal with those who were charged with being drunk and incapable, it would be of the utmost importance to ascertain under what authority that power had been vested in the police. If we apprehended men under a general statute dealing with drunk and incapables, and if one class was to be brought before a magistrate, all should be brought before a magistrate. It was a principle to be deprecated that the police, who apprehended, should have extended to them the power to remit certain persons that had been apprehended under a charge of drunkenness.

Mr. Bailie Morrison (Glasgow) contended that there were certain circumstances in which previous convictions ought not to weigh with any wise and judicious judge, such as where persons earned their livelihood in an honest manner during the interval between their first and second convictions. He believed there were many hundreds and thousands of criminals who spent that period in lawful, humble outdoor employment. He went farther, and said that a wise and judicious judge would not only consider how those criminals had passed their lives between the first and second convictions, but if the previous conviction was of several years' standing he would ignore it altogether. That was the invariable practice of the magistrates in Glasgow. While we were all agreed as to the propriety of cumulative punishment for hardened criminals, there was a grave subject in reference to the way in which we could deal with the beginning of crime. He held that if

crime was to be repressed at all it must be at the fountain-head. It was the invariable practice in Glasgow that, in all cases where no deliberation was proved, where there had been perhaps a giving way to momentary temptation, or where it was the indiscretion of youth, the magistrate put it to his own heart, and asked himself honestly, 'If this were my boy or girl, how would I like him or her treated?' and the result was that no magistrate convicted in such circumstances. He allowed the boy or girl to go away with a caution, which was practically binding him over to keep the peace to the community in respect to that particular crime, and if he came back a second time he was treated as an habitual criminal. It was a mistake if a judge took on himself the responsibility of shaping a man's, or boy's, or girl's existence by convicting for the first offence. He believed honestly that an admonition from the bench, and an explanation by the magistrates of the different position in which the person then stood from that which he occupied before, had been the means of turning many from crime. While agreeing with the proposition in the main, there were even in hardened criminals extenuating circumstances which ought to receive consideration, and no general proposition which did not admit of that qualification should be sanctioned by this section.

Mr. B. Baker said that in Gloucestershire, while a previous conviction was placed before the Court, if five years had elapsed the conviction was almost always ignored, unless there was reason to believe that the prisoner had led a dishonest life in the interval.

The Chairman (Mr. Hastings) said this was a question which had often been before the Association, and it had been due almost exclusively to the public opinion formed from the discussions of this Association that the law in this respect had been altered. Before these discussions, an idea prevailed that the punishment to be given was simply to have reference to the particular offence of which a criminal had been convicted. The principle at which the Association arrived, and which it had induced the Government to embody in legislation, was that the object should be not merely to punish a man for the crime he had committed, but to protect society against the repetition of it by himself or by others. This was where he differed from the view of Bailie Lewis. Indeed, if his thesis were correct, and if we were to give a certain punishment for a certain offence, it would be a logical conclusion that, when it was completed, you had no right to do anything more with the man. So far from it being correct that we punished a man for the offence he had actually committed, though of course it was right to apportion punishment to the offence, the main object of punishment was to prevent the repetition of the offence and to repress crime. It did not therefore follow that we were not to punish a man for his crime; we must show him that he could not violate the laws of his country with impunity, and others that if they offended in a similar manner they would be similarly punished. If, as formerly, they fixed short sentences of from three to six months for the commission of a particular crime, the moment a man comes out of prison, after serving his time, he would be ready, and probably willing, to commit the crime again; whereas, if we subjected him either to a longer imprisonment or to

police supervision, we had at least a guarantee that for a certain period society would be protected from his depredations. In other words, when a man was undergoing punishment he was incapacitated, and we knew, at any rate, that if we could not reform a man we could incapacitate him. It was on the principle of incapacitation that we must look for the prevention of crime amongst the criminal classes. He by no means agreed with the idea that the criminal was never reformed. He had known habitual criminals who had been entirely reformed; but he was aware that they were exceptions to the rule. There was little doubt that, when once a man entered upon a career of habitual crime and became a real member of the predatory class, he remained attached to it during his whole life, and it was only on the principle of incapacitating him that we could prevent him from actually and persistently preying upon society. How was this to be effected? If a man had been convicted of theft three times, we might conclude that he was a man who was following crime as a profession. He agreed with the last speaker that we must always take into account whether or not, after he had been convicted of a first offence, or it might be a second, he had been leading an honest life. If he had been, there was no judge who would not take the fact into consideration. If for three years running he had led an honest life it would be monstrous, upon a second conviction, to bring down upon him all the consequences we should if he had committed the second offence a few weeks after leaving the gaol. But when a man, after one or two imprisonments, committed a crime, it was absolutely necessary to consider that such a man had deliberately chosen crime as a profession, and as far as possible incapacitate him from the pursuit of his trade. One way of doing this was to give a long imprisonment. He agreed that, on a first conviction, the best plan was to give a short sentence, probably not exceeding a month's imprisonment. There was one advantage, to which Mr. Baker alluded, in a short sentence, and that was the effect on the mind of the prisoner on leaving gaol. If a man was in for three or four months, he was kept on tolerable diet; but if he was in for ten, fourteen, or twenty-one days, he was kept on a low diet, with much hard labour, and he came out with the impression that the prison was a most uncomfortable place. A longer sentence could not be carried out so as to produce this impression. With a short imprisonment you could regulate diet and labour so that a man came out with a keen sense of the severity of the punishment. For a second offence it was absolutely necessary that you should give a longer period of imprisonment, simply to incapacitate a man during that time from following his career of crime. If he committed a third offence, he ought to be sent to penal servitude, and it became necessary to consider the provisions of the Prevention of Crimes Act. It provided that, when a sentence of penal servitude was passed after a second conviction of felony, it should not be less than one of penal servitude for seven years. He agreed with that in principle, but not with the extent to which it had been carried. The recommendation of seven years was made by the Select Committee of the House of Lords. There were many cases in which, when a man was convicted of crime

for the third time, it might be considered right to sentence him to seven years' penal servitude; on the other hand, there were many cases in which it was not wise to pass so long a sentence; and the unfortunate effect had been that a judge or chairman was obliged to consider whether he would pass a sentence of penal servitude at all. He once had before him a man who had been convicted for the third time; but the crimes were not of a serious nature, and as a judge he felt that he might be doing an injustice to the man, and inflicting more pain and punishment than were necessary for the subsequent prevention of crime, by giving him seven years, and under the provisions of this statute he could not give him any less; he was consequently thrown back upon a term of imprisonment instead of penal servitude. At a conference of visiting justices in London this subject was well considered; and it was recommended to the Secretary of State that the provision should be modified, and the Court empowered to pass a sentence of not less than five years' penal servitude. He hoped that amendment would be made, not merely for the sake of mercy, but also for the sake of severity, because sentences of imprisonment were now passed instead of sentences of penal servitude on account of the excessive severity of a sentence of seven years. Another question involved was whether the principle of cumulative sentences should be extended to tribunals other than Courts of Assize and Courts of Quarter Sessions in England, which answered to the Assize and Sheriff's Court in Scotland, and he was strongly in favour of this course being adopted. He saw, however, there would be some difficulty in extending the principle to petty sessions. It was one thing to lay down a law to be administered by judges of long experience and considerable attainments, and quite another thing to have the same law applied by a large number of tribunals administered by others. When sitting as chairman of petty sessions he had followed the principle of the accumulation of punishments. Even in a case of drunkenness he had sent to prison for ten days a lady who had often been fined for being in public in such a disgraceful state of intoxication that she was a nuisance and a terror to her neighbours. For the first time in her life she realised her position, and she had never again appeared before the magistrates. He believed the magistrates were far too lax in dealing with cases of drunkenness. He made it a rule to inflict a double fine for the second offence, and for the third and fourth to send the offender to prison without the alternative of paying a fine. If that course were generally carried out and rigidly adhered to, he believed there would be a great diminution in public drunkenness and disorder. As to what had been said about letting people away after they had been arrested, he did not know what the custom or the opinion of the magistrates in Scotland was; all he knew was, that if any constable in the petty sessional division in Worcestershire of which he was chairman released anybody without taking him before a magistrate he would not remain twenty-four hours in the force. He never heard of such a case, and, so far as England was concerned, he didn't think it was possible. He could hardly conceive that Scotch magistrates were less strict or less just in the administration of the law than their English colleagues.

Captain M'CALL said that Bailie Lewis had mistaken what he said in regard to crimes. His paper and the tables that accompanied it were divided into two classes—crimes and police offences. From 12,000 to 40,000 were not the figures. What he said was that the decrease in the crimes during the last four or five years was 3,030, and that the increase in police offences, such as drunkenness, was 15,991. He had listened with very much interest to the paper read by Mr. Smith, and with his remarks as a whole he very sincerely concurred. There was one point he touched upon—the negligence, as it might be called, that had arisen in Scotland in regard to the working of the previous convictions of prisoners. For some years past there had, he thought, been a considerable want of energy displayed in Scotland in working up the convictions against old offenders. He thought that that had perhaps arisen partly from the fact that fourteen or fifteen years ago the Government put the Procurators-Fiscal on salaries, whereas before they were paid by fees. He thought when these fees were paid the Procurators-Fiscal worked up the convictions, and made inquiries at different places to ascertain the character of a person that had been taken up with much greater energy than at present. He was of opinion that when a person had been three times previously convicted of crime the sentence should be one of considerable severity.

POLICE SUPERVISION.

Is it desirable to extend sentences of Police Supervision to other cases than those already provided for?

A PAPER on the question was read by Major Brudenell Rogers. He commenced by assuming that a judicious administration, having for its object the suppression of crime and offences, should, as civilisation and education advance, have recourse to a gradually extended and more comprehensive system of deterrent surveillance, wherewith to protect all classes from the more or less vicious propensities of their neighbours. The liberty of evil-disposed persons, he said, if not restrained, is in itself a check on the liberty of good citizens. Fine and imprisonment would not afford the necessary protection. Confinement within jail should be avoided if possible, and an equivalent found in the adoption of an extended system of deterrent police surveillance. There existed the necessity for a code that would accommodate itself to the necessities of each individual case, and would enable the Court to award punishment, so as at the same time to protect society and tend to the reformation of the offender; the existing criminal law and present jail system not being sufficiently elastic for this purpose. A distinct line should be drawn between 'offences and

offenders' and 'crime and criminals.' The punishment of the former might be a Local charge, the latter an Imperial one. Sentences should be divided into a certain number of fractional parts, say fifteen, and awarded as the Court may direct, subjecting the criminal or offenders to more or less privation, hard work, restraint, or surveillance; the awards could be divided into ten classes, the first eight, for criminals, divided into two grades; the two last and third grade for offenders.

First Grade.

Class A.—Punishment with irons, penal diet, penal labour, and a fixed proportion of solitary confinement.

Class B.—Penal diet, penal labour, and a fixed proportion of solitary confinement.

Class C.—Penal diet, penal labour.

Class D.—Penal diet and ordinary labour.

This first grade is for the most atrocious and brutal criminals.

Second Grade.

Class E.—Ordinary labour with improved diet; half the amount earned by criminals working on their own account during recreation hours to be made over to them on discharge; and the remainder, if they wish, to be spent weekly in the purchase of specified comforts.

Class F.—Ordinary labour with improved diet, allowing criminals who work during recreation to receive their earnings weekly, and purchase therewith comforts or luxuries of specified kinds.

Class G.—Working either in or out of the establishment, with or without irons, wearing prison dress, which they should pay for, earning their own living entirely, and paying from their earnings a fixed sum, say 1*s.* 6*d.* per week, towards the maintenance of the establishment in which they live or are confined. They would be restricted by fixed rules as to what they should purchase as food, but they could, if they wished, spend the total amount of their earnings, less any sum they may be ordered to contribute towards the maintenance of their families, and thus reap the advantage of their individual labour and abilities.

Class H.—No gaol dress; criminals should be paid for their labour, less the weekly sum deducted and deemed payment for contingent expenses, and they would clothe and feed themselves according to specified list of articles permitted within the establishment. In this class a criminal would or would not, as the

Court by which he was tried might award, wear a distinguishing badge denoting his offence, when employed either in or out of the establishment.

Third Grade.

This grade is for offenders only, and termed 'Homes.'

Class I. Reside in the establishment, paying a fixed sum, say 1*s.* 6*d.* per week, towards its expenses, working in or out of it, feeding and supporting themselves, and wearing their own clothes. They would wear a distinguishing badge showing the nature of their offence, and would be restricted to certain hours. Offenders who had previously been convicted of *crimes* should not for offences subsequently committed be sent here, but to the criminal classes (G and H) of the 2nd Grade.

Class J. Inmates would sleep in quarters agreeably to the award of the Court, under certain stated restrictions, without wearing a badge showing the nature of their offence; when deemed expedient, they would have the option of being transferred to a similar institution in another town at their own expense, the amount of which could be advanced on security.

The paper illustrates the modes in which this classification should be carried out, which should be in the hands of the Court when the trial takes place and not in the jail authorities.

DISCUSSION.

Mr. E. L. O'Malley (London) said it was evident that the present system might be considered exclusively one of punishment by means of fine and imprisonment. He had heard the opinion expressed in this section that recommittals had increased of late years to an alarming extent, the more alarming, perhaps, because the proportion of serious offences and heavy crimes to the number of the population was diminishing very considerably, showing, therefore, that though severe punishment might effect this end, yet the punishments which must at present be given for first offences not only fail altogether to accomplish their purpose, but were, in fact, the means of creating a criminal population. Before accepting as a whole the scheme which had been propounded, one or two points must be carefully considered. Major Rogers had hit upon a general suggestion, which was most likely to be useful, viz., that of distinguishing in some general sense between what might be called brutal crimes or heavy criminal offences and other offences which hardly deserved the name of crimes at all. The great objection to any plan of providing work within the walls of a gaol at some fixed scale of remuneration, and allowing a criminal to ensure a livelihood

for a given period of time for a given amount of work, was that it would always be viewed by the neighbouring population with a great deal of jealousy. When remunerative employment was introduced into prisons the mat-makers protested vigorously, and said the bread was being taken out of their mouths. There was a great deal to be done in the direction of placing our first offenders and small criminals in such a position as to bring them under the observation from day to day of those who were concerned with the administration of criminal justice. It would be important to afford to visiting justices the opportunity of watching the effects of prison discipline upon discharged prisoners; but our system of criminal administration failed to recognise this. In addition to this it would be well if offenders could be placed in positions in which their actions could be controlled by their friends, and where they could be kept in contact with those who were anxious for their reform, for those who were on the verge of crime were peculiarly exposed to temptation from others of their own class. If the criminal classes could in this way have the punishment for first offences more directly brought within the scope of their observation; if they saw the inconvenience, annoyance, and restrictions to which offenders were exposed, they would be ready to learn the lesson intended to be taught them. We must remember our criminal classes, as a whole, were criminal merely because they lacked management altogether. They did not appreciate the suffering and misery which crime would bring upon them; and if they could see certain classes of offenders, instead of being allowed to wander about the streets, put under certain irksome restraints, and bound to report themselves daily, or compelled to do an allotted portion of work, they would be better able to foresee the error of the course they were about to embark upon, and the force of example would act upon them in a favourable way. The scheme was proposed at a time very favourable for its consideration by those who were in authority, and who were connected with the administration of the criminal law. A valuable portion of the paper was that in which it was suggested that offenders should be compelled to provide the cost of their maintenance by their own labour, or that those who were responsible for them should be compellable, as in the case of children committed to reformatories, to contribute towards their support. In that way we should get rid of one of the most widespread impressions among the criminal classes, which was, that the cheapest and easiest way to get rid of those for whom they were responsible was to hand them over to the custody of the State as criminals. If in all cases they were made to feel that the first obligation arising out of the punishment of an offender would fall upon themselves, we should see more persistent efforts than hitherto made by parents and guardians to keep the young in their charge out of the meshes of the criminal law, and they would be more anxious than they were at present to see them decently educated.

Mr. Barwick Baker (Gloucester), though differing on some points from Major Rogers, admired the way in which he had arrived at the soundest principle. Having himself written one or two papers on the subject, he should not be accused of plagiarising when he showed he had long believed that one way of lessening the gaol population was to

extend the practice of police supervision. He had no spite against architects, but he objected to building where it could be avoided; and, instead of more gaols, he wished to see the number reduced, as it had been in Gloucestershire through the adoption of police supervision. Mr. O'Malley remarked that police supervision was not as yet sufficiently perfect. It was very curious how our Legislature had given us all the machinery necessary to make police supervision perfect and admirable, and yet somehow we had fallen short of putting all the wheels we had got into gear. Many were not aware of the means we had for police supervision. It was left now entirely to the chief constables of counties; but he feared that in many counties the justices did not concern themselves very much about the way in which it was carried out. This he held to be a great failing. Where there was a difficult work, a work requiring great delicacy and nicety, it was not fair that they should call upon the chief constable to see to it, and never give praise or blame. Everybody required the stimulus of public opinion. The chief constable of Gloucester at every Quarter Sessions produced a list of all the men he had under supervision, whether convicts, or ticket-of-leave men, or persons sentenced to police supervision, and he gave an account of what they were all doing; and the applause he got for it made all the police anxious to keep it up, and to do their work thoroughly well. Still Gloucestershire had no connection with any other county. There was a criminal register office in London which was intended to form a connecting link between the police of all counties, and to enable the police to keep a watch over all men who went from one county to another. If that connection were maintained, it would not be many hours' work for a chief constable to make his return; and if he were to make a return to the central office, it would be known how each liberated criminal went on, and the Home Office would know how the work was being done all over the country. The work would not require an additional officer nor an additional clerk, and only a slight expenditure in postage. Then we should have the best possible system of police supervision. He did not hold with Major Rogers that a man who had been imprisoned was necessarily ruined for life. Really it was not the gaol that branded a man, but it was having committed a crime, and the gaol was only a slight outward mark; the public did not consider the imprisonment as a brand. If a man had committed a crime, sending him to prison did not make him any worse. It would be a good thing to keep as many persons as possible out of gaol; and it would be a very valuable thing to employ police supervision for first offences, and to make an offender find bail. Many did not yet understand what police supervision would be with our police, which was not like the continental police. Continentals distrusted their police because they were government spies; but our police had nothing to do with Government or with politics. In the counties they were appointed by the country gentlemen, and generally the police were the truest friends of the ex-criminal so long as he went on doing well. If he went wrong they were still his truest friends in supporting him, even by imprisonment, if there were no

other way. To imprison a man was a much more friendly act than to allow him to persevere in crime.

Major BRAKE (London) said that in India police supervision was carried out to a great extent. Prisoners on their discharge were sent from place to place to their own homes, and the police of each district were responsible for their movements. He had strongly recommended that no boys, and especially that no girls, should be sent to gaols. It was difficult to find a punishment for a young girl in an Indian gaol. He strongly recommended that boys should be sent to reformatories. One was established in India, and one English official reported in its favour and another against it. Perhaps the best punishment for a boy was to flog him severely, and send him home to his friends.

Rev. Dr. ACE (Gainsborough) was against any further extension of police supervision. No moral benefit could result from always seeking for the degradation of the offender. There was something in the heart that must be corrected by the influence of superior minds before we could hope for the reformation of our culprits, and that influence was not likely to be exercised by the wisest of police officers. Therefore he would always send young offenders where they were likely to be subjected to such influence.

Mr. Sheriff WATSON said that the average term of imprisonment in certain gaols was twenty-three days, and there were many cases in which the term did not exceed ten days. These periods were too short to do a man any good, or to teach him any industry; and it certainly did injure any one permanently to be sent to prison. Respectable women had refused to work with a woman who had been in prison; and yet the number of offences for which a person might be committed to prison went on increasing, until imprisonment was the penalty for throwing orange-peel on the pavement or sliding on the ice. A stop was put to that sort of thing by a general enactment that for certain offences anyone under fourteen should be sent, not to prison, but to a reformatory; and the result was that the gaols had been kept free of children.

Mr. J. SMITH (Governor of Edinburgh Gaol) said it was worse than useless to send young children to prison, and gave statistics showing the remarkable diminution of juvenile delinquency in Edinburgh that followed the establishment of the ragged schools, in response to an appeal he made to the ministers of religion, including Dr. Guthrie, who took the matter up. He had not much faith in police supervision. If the police were to look after any one on the commission of a first offence, the chances were that person would be ruined. In the case of a woman supervision was tantamount to an exclusion from all honest service.

The CHAIRMAN (Mr. Hastings) said, so far as his own experience went, he differed altogether from those who thought police supervision was in any way detrimental to the interest of the discharged prisoner, and, so far from preventing men or women obtaining employment it was found to be a means of facilitating their employment. The business of the police was to do for discharged prisoners what they had no call to do for others, viz., see that they were put in the way of living honestly; and in his own county there was no part of the duty of the

police that was more efficiently and benevolently performed than that of looking after those who were by the sentence of a court placed under police supervision for a limited period. It was the duty of the police to care that such persons did not relapse into crime; and they had sense enough to know that the best way of doing that was to procure them employment, or put them in the way of finding it. So far from the discharged prisoner being a marked man, and having a stigma put upon him, nobody but the police knew that he differed from those about him; and, with the exception that he had to report himself to the police, he was free to go where he liked. The police were officially interested in, and they often obtained employment for, a discharged prisoner. As to the suggestion that justices in petty sessions should have the power of sentencing a man to police supervision instead of sending him to prison, he would not at once pronounce decidedly against it, but he should require to hear more upon it before pronouncing an opinion absolutely in its favour. There was some error in the view some of the speakers had taken of the injury done to a man by a short sentence of imprisonment. He was strongly opposed to a short sentence when once it was proved that a man had entered on a career of crime; but he had so often seen the benefit produced by a short sentence of a few days that he would hesitate to say such sentences ought not to be passed. He should not be indisposed to see the experiment of police supervision tried; but he thought that punishment of some kind should inevitably follow the commission of crime. It was not merely that you wanted to produce an effect on the particular man, but by the infliction of absolute punishment you should show the community around that crime will not go unpunished. It was not for us to take vengeance on a man under the supposition that we were awarding the particular punishment due for a particular crime—that could be done only by a higher power; but it was for us to inflict punishment by which others might be deterred from crime. It was a sound principle of criminal jurisprudence to deter from the commission of crime by inflicting a penalty for every offence. He was not prepared to approve a proposal that no punishment should be awarded when crime was proved, and the offender only placed under police supervision. Supervision might be healthy and useful, but wherever punishment would be healthy and useful it also ought to be inflicted when a man had broken the law.

Major Rogers (London), in explanation and reply, said he proposed that every offence should be punished. It was the minor offences that led to the greater offences; but there were offences of impulse which were of a different nature altogether from crimes.

Examination of Accused Persons preliminary to Commitment for Trial. By WILLIAM BURNS, Dean of the Faculty of Procurators, Glasgow.

FROM the title on the programme, it will be apparent that, in the observations I have to submit to the Section, I do not propose entering upon any discussion as to the merits of the Scottish system of criminal investigation by means of public prosecutors, as contrasted with the English system in this respect. Neither do I contemplate a discussion on the general course of procedure. I assume that our system generally has approved itself, as a whole, to the deliberate wisdom of those best qualified to judge; and what I do propose is, to present for deliberation the question, how far in certain details the system or practice is capable of being defended, or might be amended. I refer to that part of the procedure consisting in the taking of 'declarations,' as they are termed, of accused parties, and the relative 'precognitions' preliminary to commitment for trial.

At the same time one cannot well deal even with these, without bearing in view the fact of the wide difference that exists between the practice of the two divisions of the island, or without keeping his mind open to the impression that some important principles must underlie the rooted conviction that seems to exist very generally among our English brethren in favour of their system. According to that system, a party accused of a crime or indictable offence is not subjected to any private examination. He is publicly confronted with the witnesses against him. He has the privilege of being advised and assisted by counsel or attorney, by whom the witnesses may be cross-examined; and while he may be thereafter asked, in general terms, whether he has any statement to make, he is not subjected to interrogation, but may, as advised by his counsel, simply 'reserve his defence.' He may even call witnesses in exculpation. In this way, he is not required or induced to 'criminate himself,' and, what is of material consequence, he and his legal adviser know from the outset the general character of the evidence, and the witnesses who are to support the charge.

The practice in Scotland, on the other hand, may be stated as follows:—When a person is accused of a crime or offence, not falling to be dealt with summarily, he is apprehended and taken before a Sheriff or other Magistrate for preliminary

examination. The charge is read over to him, and he is asked if he has any statement or 'declaration' to make. No doubt, as set forth in the recent report by the 'Royal Commission upon the Courts of law in Scotland,' it may be customary that the accused is cautioned that he need not speak unless he chooses, and that any statement which he makes may be used in evidence against him.[1] But, while the witnesses examined under the Commission say that it is usual and *proper* so to caution a prisoner, the doing so is confessedly 'not indispensable,' and consequently does not require to be set forth. This is, indeed, not only laid down by our writers in criminal law, but has been expressly decided by the Court so late as 1862.[2]

Then, as the Commissioners' report says, 'at this stage the party accused is not allowed the advice of an agent or to communicate with anyone; he must *take on himself* the *responsibility* of making or declining to make a statement, or "declaration," as it is called.'

In theory such declarations are assumed to be entirely voluntary. But again, unfortunately, it has been judicially decided that 'it is competent for the public prosecutor to lay before the jury a document bearing that the prisoner refused to make any statement or remained silent.'[3] In other words, the declinature to make a declaration may be used in evidence against him. So, when a prisoner does commence a statement, he may be (and actually is) subjected to a series of interrogatories (in fact a cross-examination); and 'when he declines answering certain questions (as he is entitled to do), the question and refusal are set forth in the declaration'[4] for the purpose of course of being used to his prejudice. This is what is called a 'voluntary declaration'!

The witnesses examined under the Royal Commission (chiefly sheriffs substitute and procurators fiscal) no doubt give a very favourable account of how these matters are managed in actual practice. Some of them say the examination is conducted by the magistrate himself, but others admit that this is done by the fiscal. For example: Mr. R. B. Johnston, procurator-fiscal for the county and city of Edinburgh, makes this statement:—

"*Q.* 'How do you conduct the taking of prisoners' declarations?

A. 'In presence of a magistrate.

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[1] 5th Report, p. 2.
[2] *Alison's Criminal Practice*, p. 564; *Dickson on Evidence*, § 1,410.
[3] Dickson, § 1,417. [4] Dickson, 1,417.

Q. 'Who dictates the declarations?

A. 'I do; and I believe this is sometimes the case even in counties where there are professional sheriffs.

Q. 'You put the questions and dictate the answers?

A. 'I do.'"[1]

He says he 'sees nothing against the practice, if the prosecutor be assumed to be a judicious prosecutor,' and that 'upon this assumption he sees nothing against it all over Scotland;' but he admits that, 'assuming the prosecutor is one-sided, it is *most dangerous*.' Turning to a work on the law of evidence by Sheriff Dickson, of Glasgow, a gentleman of great experience, I find it expressly stated that 'declarations are almost always emitted in answer to questions put by the procurator-fiscal.'[2] That the answers *must* often be so dictated is evident from what follows, where it is laid down that the magistrate may be 'occasionally absent' if the declaration 'is substantially taken in his presence;' and in illustration the author refers to a case where the Court by a majority repelled an objection to a declaration that the magistrate had been *asleep*, on the ground that he had only 'fallen asleep at intervals, the longest sleep having been a quarter of an hour, and the whole time so spent having been half an hour!'[3] Such being *the law*, it seems childish to suppose that procurators and sheriffs substitute will put themselves to unnecessary inconvenience in the matter. Mr. Dickson, like everyone else, lays it down that, 'It would be manifestly an abuse of the practice to importune or press the prisoner by a searching examination;'[4] but on the same page he cites a case where a declaration was objected to as 'minute, searching, and oppressive,' having extended over a period of four hours, yet the objection was repelled by the Court.

The next feature in the course of procedure is that 'The declaration is *not* evidence for the prisoner, nor can it be laid before the jury unless the prosecutor consents.'[5] If the declaration serves the prosecutor's purpose, it is used as evidence; it is laid before the jury; if not, it is withheld; in other words, disguise it as we may, the accused is made a *competent* witness for the prosecution, but not for himself. A great deal is said by the witnesses before the Commission as to the check upon the exercise of this power, upon the part of a prosecutor, by counsel for the prisoner calling for the de-

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[1] *Minutes of Evidence*, p. 337; Nos. 9,161–9,163, 9,169, 9,170, 9,174.
[2] Dickson, § 1,411.
[3] *Ibid.*, 1,406.
[4] *Ibid.*, 1,411.
[5] *Ibid.*, 1,428.

claration, and, if refused, commenting upon this to the jury, and as to the propriety of withholding declarations in which the accused has reflected upon third parties. But I must confess I have failed to follow the reasoning.

If the sole purpose of these preliminary proceedings were to ensure the conviction of accused parties at the trial, then not only 'declarations,' in the sense of the Scottish practice, and even a system of 'interrogation,' as practised in France, might be justified, but physical as well as moral torture might for the same purpose be resumed. Something else, however, must be kept in view. The fundamental principle, at least, of British jurisprudence is that every subject must be considered as innocent until he is found guilty on legal proof. To this the English practice gives, perhaps too unqualified, an effect. In France it seems as if every accused person may be treated as guilty until the reverse is proved. In Scotland we profess to recognise the principle, but the question we are now to discuss is, whether the French example, upon which our Courts and judicial procedure were originally so much founded, does not in some respects remain too powerful. And here I may borrow a passage from the evidence of Lord Ardmillan before the Royal Commission. His Lordship went confessedly somewhat aside from the point before him to make some remarks upon Lord Brougham's suggestion, that an accused person should be 'allowed, if he saw fit, to tender himself as a witness in his own cause.' He (Lord Ardmillan) did not approve of this, for reasons I shall advert to immediately; but in course of his remarks he said: 'I think the conviction of the guilty, although one and perhaps the chief end of criminal procedure, is not the *only end;* it is the conviction of the guilty by means which commend themselves to the confidence (and I humbly think his Lordship might have added the sympathy) of the public.' One of the reasons given against making the accused a competent witness was, that 'if he is to be competent only for himself, then every man who does not tender himself will be believed by the jury to be guilty, because, as he has himself always at hand ready to say whether he is guilty or innocent, and does not choose to call himself, he will be *at once* believed to be guilty, and it would be no favour to prisoners to place them in that position.' And, again, 'It is not according to the principle or spirit of British justice to obtain convictions by *wringing confessions* from the accused, and I don't think the calling of a man as a witness and putting him on oath against himself is a thing that ought to be tolerated

in a criminal trial in this country.'[1] At the same time his Lordship expressed his general approval of our system of preliminary declarations, and the result seems to have commended itself to the Commissioners, who reported in favour of the existing practice.

Now, with all possible respect for these gentlemen (almost all of whom were official lawyers), I cannot help thinking there is something singularly illogical in this position. It just amounts to this:—An accused person shall not be a competent witness for himself at the trial, because, if he fails to give evidence, the jury will 'at once believe him guilty'; but the accused is invited, or at least allowed, to make a so-called 'declaration,' under certification that, if he declines to do so, or refuses to answer special interrogatories, these facts may be laid before the jury, for no conceivable purpose other than to create a presumption of his guilt. Is the one thing, I may ask, not as repugnant to the 'principle and spirit of British justice' as the other? That principle is recognised in the general plea of 'not guilty' at a trial. But, if the prosecutor has already a detailed declaration in his possession, which he is entitled to use in evidence, the general plea seems to my mind something very like a mockery. But further, in the supposed case, the accused would give his evidence under the protection of judge and jury, and assisted by his own counsel or agent; whereas, in the actual case, he gives what is practically evidence to be used against him at the discretion of his prosecutor, before a private inquisition, like a rat shut up in a room with its natural enemies. In the supposed case, he would give his evidence after an opportunity for taking precognitions, and being confronted with the witnesses against him, while in the actual case he must speak, if at all, in total ignorance of everything but the formal charge.

No doubt, if we are to adopt implicitly the views expressed by the official witnesses examined before the Commission, we might be disposed to think that, *in practice*, the system is so *judiciously worked* as never to lead to anything like oppression or injustice; nay, that the procurators-fiscal throughout Scotland stand very much in the position of local 'ministers of justice,' who feel it their duty, not merely to act with perfect impartiality, but even to throw their protection around parties accused; and this seems to be so far endorsed by the Commissioners' report. 'It has been urged,' says the report, 'that

[1] *Evidence*, question 10,158.

it is unfair to the accused not to allow communication with friends and agents at the time when declarations are taken, because an innocent person accused is apt to be excited and unable to give an accurate account of the facts, or, if conscious of circumstances which have excited suspicion against him, is not unlikely to deny them, or give inaccurate explanations, and the prosecutor, proving errors in the declaration, uses the fact of erroneous statements having been made with great effect against the accused. All admit that declarations are often powerfully effective in obtaining convictions; none have asserted that declarations of the accused have been the means of obtaining *convictions* against innocent parties.'[1] This passage would have been more conclusive if it had negatived the supposition that innocent persons have been committed for trial (of which I propose to furnish a rather remarkable instance), or actually tried, in consequence of their declarations, although eventually acquitted. The report proceeds to say the Commissioners would consider it a 'misfortune if any alteration should be made in order to give effect to this objection;' that they 'think it purely theoretical and based on a tendency to push beyond its legitimate application the theory that no man is bound to criminate himself.' It is added that such things as examinations, with the view of entrapping, have been 'effectively put down by the court,' which has declared pressure by questions to be foreign to the purposes of examination of persons accused. Nevertheless, the report contains this rather naïve sentence:—'All admit that, if communication with an agent were permitted before declaration, the result would almost invariably be that the accused would decline to make any statement.' This being so, I confess I am quite unable to look upon the practice otherwise than as a deliberate means of causing accused parties to 'criminate themselves.'

In saying so, I repudiate all or any intention of reflecting upon the respectable body of procurators-fiscal in Scotland. What I mean to convey is this: that, so long as human nature remains what it is, it is scarcely possible for parties engaged in the prosecution of offences to avoid falling, however unconsciously, under the influence of a desire to secure convictions. I say nothing of others, in this respect, than what might apply to myself, and, as I understand, for this very reason the principle underlying all legislation affecting the liberty of the subject in this country is, by judicious regulations, to exclude,

[1] 5th Report, p. 4.

s far as practicable, anything like arbitrary action, or the xercise of individual and, it may often happen, mistaken dis-retion.

Returning to the position of an accused party in emitting a declaration, I find Mr. Dickson, in his 'Law of Evidence,' making this remark:—'Besides (other things), a person may have private reasons, entirely unconnected with the subject of the charge, for disguising the truth regarding matters embraced in his declaration.'[1] And the writer adds this illustrative note:—'Within a few hours after the mysterious murder of the bank porter, Begbie, in one of the streets of Edinburgh, the contents of most of the low gambling-houses and houses of bad fame of the city were swept into the police office, when several of the citizens of good position, as well as many notorious criminals, emitted declarations as to their doings that afternoon. How many of these would, upon investigation, have been found free from falsehood and prevarication?' I ask, How many?

This naturally introduces the special case occurring in my own experience to which I have already referred, and which I shall give without unnecessary details. Some years ago I had a client occupying a respectable position in business, and socially well connected. One morning I was waited upon by a brother of his to say he had been apprehended, under a criminal charge arising out of a serious robbery that had just occurred, and was anxious to see me professionally. I accordingly went to the police office for this purpose, but was told I could not see the prisoner, as the case had been 'remitted by the magistrate to the sheriff,' and was now in the hands of the procurator-fiscal, to whom I must apply. I did so apply, but was answered that, according to established rule, the prisoner could not be allowed to see me, or any one, until he should be either committed for trial or discharged. I wrote the accused a note, saying the only advice I could, in these circumstances, give him was, 'respectfully to decline making any declaration in the meantime.' This note, left open, I enclosed to the procurator-fiscal, with a request that it might be delivered. The result, so far, was that my unfortunate client was committed for trial upon a charge of reset of theft, but, after some trouble, was liberated on bail.

I had then an opportunity of conversing with him, when I found my note had not reached him, as I suppose this also would have been contrary to rule. I found he had emitted a

[1] Dickson, Section 1,431.

declaration, and, on obtaining copies of this and of the charge, I at once remarked that, if he was convicted, this would be, so far at least, in consequence of the terms of the declaration, in which I found special reference made to certain mysterious anonymous letters found in his desk, regarding which he had either refused to give any explanation, or had given an account palpably unsatisfactory—at this distance of time, I forget which. I pointed out that, if I was to be of any service to him, he must speak without reserve. Of course, he solemnly assured me of his perfect innocence, explained the suspicious circumstances that had led to his apprehension, and in particular that the mysterious correspondence had reference to the position of a friend in a 'delicate *affair*'—no way connected with the charge—which he had felt himself bound in honour to conceal, and hence his silence or prevarication.

At first I merely proposed measures for defending him at the trial, with good hope of success; but he urged that some effort should be made to have the committal itself discharged, as having proceeded upon imperfect information. As he said, 'If I am sent to trial, before the Justiciary Court, along with a set of robbers, whatever may be the result, I am a ruined man; my good name and credit are gone; I can never hold up my face again in Glasgow, and must leave the country, not to speak of the disgrace to my relatives.' All this, I saw, was too true. So I proceeded to find out and precognosce the witnesses who had been examined by the fiscal, and others whose names were supplied to me—specially as to the mysterious letters—and, as the result, came to be perfectly satisfied of my client's innocence. I then proposed to the fiscal to hand him those precognitions, with a view to a reconsideration of the case, but was, I suppose unavoidably, referred to Crown counsel. In consequence, the whole papers were forwarded to Edinburgh. The perusal of these led to an instruction to the procurator-fiscal to resume the inquiry, with reference specially to the information so furnished, and report. This was done accordingly, and was eventually followed by an order for the discharge of the accused.

This man continued my client for years afterwards, and died respected and even wealthy, but he escaped moral and social ruin by a very close shave. His case is, indeed, only one, but, if such a case occurred within my very limited experience in criminal practice, who can say how many others might be found on inquiry?

In the report of the Royal Commission reference is made to various suggested improvements, one of which was, 'That,

after being committed for trial, or liberated without such commitment, the accused ought to be entitled to a copy of the precognitions.' Of this suggestion the Commissioners expressed their approval, adding that any 'charge' for such copies would 'operate as a barrier.' The importance and reasonableness of such a provision are very apparent. In England the accused and his counsel, or agent, have an opportunity of seeing and hearing the witnesses on whose evidence the commitment proceeds. There may be good public reasons against the publicity of such inquiries; but surely an accused person, once committed, is entitled, in fairness, to have the earliest official means of consulting a legal adviser, in place of requiring to hunt about for the names of the witnesses, and attempt to obtain information by means of precognitions made by or for him!

I shall only further notice the answer made by the Commissioners to the suggestion 'That the accused person ought to be allowed to provide himself with the assistance of a law agent or counsel, if he think fit.' This, of course, applied to the preliminary stage of the 'prisoner's examination.' The Commissioners' report upon this is as follows:—'The third proposal, that the accused should be allowed to provide himself with counsel and agent, is a regulation which would practically be available only *for the rich.* We have already stated that the poorest criminal is defended *at his trial.* According to our present system, every person apprehended on a criminal charge has information given him of the particular matter with which he is charged, before he is asked whether he has any declaration to make; and, after he has been committed for trial, that is, within a few days after his apprehension, he has free access to his agent, so that ample opportunity is given for preparing his defence.'

Upon this I would humbly remark: (1) If the regulation would be a fair one in itself, why should it not be 'available for the rich,' that is, for those who can afford to pay for it, as in the case of my client? (2) If the regulation would be a just, humane, and proper thing in itself, what answer is it to say the accused will be defended at the *subsequent* trial? And (3) if there is no difficulty in the 'poorest criminal' finding a counsel or agent at his trial, why should it be impossible to obtain the assistance of an agent at the critical stage of the examination? My experience rather suggests that there would be no such difficulty; but, at all events, the circumstance that the privilege would be most certainly available for the rich

cannot form any good reason for altogether depriving the poor of the opportunity.

In conclusion, I would humbly suggest the following practical amendments upon the present practice:—

1st. That every person apprehended on a criminal charge shall be entitled to provide himself with the assistance of a law agent or counsel, if he sees fit.

2nd. That such law agent or counsel shall be entitled to be present while the accused is examined or emits a declaration, and to suggest questions, to be put through the magistrate.

3rd. That it shall be imperative upon the magistrate to caution the accused that he need not make a statement unless he chooses, but that what he does say may be used in evidence against him, and that the fact of such caution being given shall be set forth in the record.

4th. That in every case the prisoner's declaration and answers to questions shall be dictated by the magistrate.

5th. That it shall be in the power of the accused, at the trial, to insist that any declaration he may have emitted shall be read to the jury; and

6th. That, in case of commitment for trial, the accused shall forthwith be furnished with (1) a copy of the charge, (2) a copy of every declaration he may have emitted, and (3) copies of the precognitions of witnesses upon which such commitment proceeds.

On Industrial School Trades. By Archibald John Black.

I HAVE been frequently led by my experience as a Director of the Greenock Industrial School to ask myself the question, 'Is it right or proper that the boys confined in our reformatory schools should be compelled to learn trades while in these institutions to which they may not devote themselves in after life?' The Industrial Schools Act insists, and that rightly, that all boys in such institutions shall be obliged to learn some industrial handicraft—it matters not what it is—for several hours a day during the period of their confinement, in order that they may go forth to the world in early youth no longer as waifs and strays, but, it is to be hoped, to take their places as respectable members of the social fabric. A large part of their time, as every one knows who has the least acquaintance with the working of these schools, is devoted to instruction in

'the three R's;' with that, however, I have at present nothing whatever to do. But I have no doubt it will be at once admitted, since the adoption of some trade is rendered compulsory under the Act, that the selection of a suitable one is a very important matter indeed, and one which may affect, in no small degree, the future position in life of the boy. These boys, be it remembered, have all tastes and inclinations, like the more fortunate portion of the human species. They have, therefore, in my humble opinion, as good a right as the other subjects of this realm to choose an occupation by which they may honestly earn a livelihood when their time is out; but in the vast majority of cases they are prevented from exercising the bent of their inclination, by the limited selection they can, at the best, make, while under training at these schools. In large cities, such as Glasgow, where the inmates are numerous and the resources of the establishment ample, the difficulty, I grant, will not be so much felt; but in small provincial towns, where there may only be one, or at most two, trades carried on, the Directors of these Reformatories have no option but to cause them to learn one or other, however distasteful it may be to the lads. Fancy a boy who has spent several years of his life at shoemaking, and after acquiring considerable proficiency in the art, on reaching the age of 16, beyond which he cannot be detained, beginning life again by binding himself as an apprentice to a blacksmith—an occupation more in accordance with his notion of things! This is a case which actually came under my own observation. Many cases of a like kind might be cited for the purpose of showing how absurd it is to compel a boy to spend several years of his life going through the drudgery of learning a trade not at all adapted to his disposition, and one which he will never follow, in the hope—often, alas! a vain one—that the habit thus acquired for skilled labour will keep him from ever becoming a mere day labourer, and that simply because it is not in the power of the Directors to give him anything else! This is a state of things which, I think, ought not to continue, and by way of remedy would respectfully suggest two plans for the consideration of those friends who interest themselves in the business of the Repression of Crime Section, viz.:—1st, That the committing magistrate should have a discretionary power, on the representation of the Directors, to transfer a boy to another Industrial School, where an occupation more congenial to his nature can be obtained; or, 2nd, that the Directors of the Reformatory in which he may be confined should be obliged to seek employment for him during the working hours

outside the Institution better suited to the boy's capacity and taste.

I have thus very briefly and imperfectly stated my views on what I esteem an important subject connected with the management of Industrial Schools. Whether they are shared in or not by the members of this section, I, of course, do not know, but will be glad should anything I may have said bring out an expression of opinion on the subject.

On the Criminal Responsibility of the Insane.[1] By D. YELLOWLEES, M.D., Physician Superintendent of the Glasgow Royal Asylum, Gartnavel.

DISORDER of the mind is a prominent symptom in various diseases affecting the brain. It is not in itself the disease but only a symptom, and it may arise, like difficulty of breathing or any other impairment of healthy function, from a variety of causes. It may result from some condition primarily affecting the brain, or from secondary brain disturbance, caused by disease in some other organ; but the special form of mental disorder which shall appear in a given case cannot with any certainty be foretold. In another person a similar illness might have evoked no insanity at all, or insanity of quite a different type.

This uncertainty as to the occurrence and the character of mental disorders shows how much depends on the temperament or mental constitution of each individual.

The special nervous organisation inherited by each of us has a power and significance in our daily life which we are only beginning to realise. It is the complex result of a long and most complex series of influences, for it has been variously modified by the training habits and history of all our ancestors and transmitted by each with increasing complexity. We are each one of us but the latest link of a long and tortuous chain of complex human lives. Every life adds a link, but no two links are the same, and every link affects all that follow.

The inheritance of an unstable nervous organisation is the great predisposing cause of mental disorders, while their actual occurrence is determined by special circumstances in the life history of each individual. In favourable circumstances the nervous system proves equal to its work, and insanity is never developed. In less favourable conditions the burden of life

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[1] See *Transactions*, 1864, pp. 178, 276.

proves too great, and the unstable brain gives way. The sorrowful inheritance may reveal itself by eccentricity, defect, and failure; or it may be urged into excitement by vicious and intemperate habits; or it may sink into despondency, and form out of the sorrow which is the common lot of men a hopeless cloud of gloom.

Whatever the form of the insanity, its degree varies extremely, not only in different individuals, but in the same individual at different times. None of the indications of disease are so indefinite, variable, and difficult to interpret as its mental symptoms.

Yet insanity is a symptom so distinctive, and involving such grave consequences, that we cannot wonder if it has often been regarded as in itself the disease, and if in doubtful cases men have demanded some clear definition of its nature, and some unfailing test of its presence.

But this demand it is not easy to satisfy. The deviation from soundness to unsoundness of mind is so gradual that no absolute line of division can be drawn. There is no positive sign to indicate at once, with the accuracy of a chemical test, that insanity is present, and no pathognomonic Shibboleth which immediately betrays its existence. We witness daily around us the strangest diversities of character and the wildest absurdities of conduct among men who are regarded as sane, and we can observe in all stages of the deviation that divergence from mental health which constitutes insanity. We all know persons, not confined in asylums, whose conduct is so uniformly erratic and foolish that if they did any judicious action we should hear of it with welcome surprise, while the news of any fresh absurdity would be received as a matter of course, with the comment that it was just like them.

In truth we presumably sane folks are dwellers on a table-land called Mental Health. The surface is uneven, but still practically it is a table-land. Far below is the sad dark valley of absolute insanity; and connecting the valley with the table-land, passing into each so gradually that no division can be seen, is a long sloping hillside thickly peopled with a moving multitude of men, all of whom exhibit more or less pronounced and more or lest permanent insanity. Some are so well that they are scarcely on the slope at all; others so ill that they have almost reached the hopeless valley. Some go down hill quickly, and as quickly rise again to prominent places in the table-land; others, vainly struggling, and sometimes almost reaching it, ever and anon fall back again into the valley of gloom. This is no fancy picture; it is simple literal truth.

While all the dwellers on this slope are of unsound mind, the degree of unsoundness varies greatly, as their relative levels indicate, and all of them possess some share of sanity. They are influenced by the same motives as ordinary men; they know right from wrong, and they act in many respects like reasonable and accountable beings. It is this mixture of sanity with disease which alone makes it possible to govern a colony of the insane through the same motives and inducements which influence others, instead of by coercion and restraint.

But the influence of ordinary motives and the sense of responsibility for wrong-doing have power among the insane only to a certain extent and up to a certain point; they are overwhelmed and overborne—occasionally, periodically, or permanently, as the case may be—by morbid impulses or the force of delusions, and while disease is thus paramount the patient is certainly not a responsible being.

It may be, for example, that delusions so pervert his idea of right and wrong that he murders his child in obedience to a divine command, and regards it as a holy deed; or he commits the same act under a motiveless, resistless impulse, and shudders at the horrible crime. But whether the insanity affect chiefly the intellectual or the emotional nature, the deed is the result of the disease, and the doer is innocent.

Yet in this very patient there are probably periods of time and portions of his mental life which are not dominated by disease, and within which he may exhibit the best traits of humanity, or may give way to its darkest passions, and practise falsehood, dishonesty, or violence, without the excuse which insanity affords. He may even be acute enough to feign his insanity in order to excuse his wickedness, like a patient who formerly had imagined himself to be Jesus Christ, and who told me with great satisfaction how easily he had robbed a garden and frightened its owners by declaring his divinity.

Such are the dwellers on the slope; no two of them are alike, and each one is a variable and difficult study. Yet it is across this slope that the law tries to draw a rigid red line of legal responsibility, pronouncing all above the line to be sane and responsible, and all below it irresponsible, because insane. Or perhaps it is more correct to say that the law ignores the slope entirely, and assumes that a sudden chasm or precipice divides the table-land above from the valley below.

This assumption is contrary to all experience and to all analogy. Nature has no straight lines nor strict divisions, and certainly there is none here. If a man understands the nature and quality of the act he is committing, and knows he is doing

wrong, the law declares him responsible, even although he may be impelled to the act by insane delusions. This test includes among responsible agents not only all dwellers on the slope, but very many inhabitants of the hopeless valley. Certainly a majority of the insane understand the nature of their actions, and whether they are or are not contrary to law; but Disease reckons nothing of moral or legal codes, and obeys only its own morbid impulses.

This legal definition of responsibility is so palpably at variance with our knowledge, that there is usually complete uncertainty as to the result of a criminal trial in which the defence rests on the plea of insanity. An array of medical witnesses is summoned on either side, and being retained to support a certain view, they consciously or unconsciously see chiefly the facts in its favour; hence result the disagreement of the doctors, the bewilderment of the jury, and the dissatisfaction of the public.

If it be a capital charge, and the prisoner is condemned, the plea of insanity is assumed to have been fictitious, and the next lunatic prisoner may suffer innocently. If the prisoner is acquitted, we are told that justice has been defeated, because there was money enough to get up proofs of insanity, and that for the same crime a poor man would certainly have been hanged.

This very uncertain and unsatisfactory state of matters calls loudly for a remedy. The question to be determined is, whether the alleged crime was the result of disease, and whether the prisoner's mind was at the time so weakened by defect or disease that he was unable to control his actions. The inquiry demands an intimate acquaintance with the history, causes, and manifestations of mental disorder; it must be undertaken in a judicial spirit, and without the slightest bias.

This would be secured if the Court obtained the testimony of disinterested medical referees familiar with insanity, a course which is followed by the Secretary of State when he sees reason to question the result of the trial; or it might equally be secured if the judge in trying such cases were empowered to obtain the assistance of men specially familiar with them, a course which the law authorises in certain Admiralty and Chancery cases. The adoption of either of these courses would secure substantial and equal justice to the accused, would satisfy the public mind, and would greatly facilitate legal procedure. It would also secure just awards for offences committed during intervals of comparative sanity, or during the insanity

produced by habitual drunkenness; for there are cases where the mental condition should modify rather than annul the penalty due to crime, and at present such cases either escape punishment altogether on the ground of insanity, or are punished with unjust severity.

Although it is in the case of capital offences that the existence of insanity attracts most attention, the connection between crime and insanity is a far wider subject, and constitutes one of our chief social problems.

The slope of insanity supplies a large proportion of the criminals to our courts of justice; and daily the perplexing question arises whether the panel is more rogue or fool, whether the madness or the badness is uppermost. This question is the more complicated, because in certain cases sometimes the one and sometimes the other seems to have the supremacy, while each condition so taints the other that the result is one of the most perplexing, most unmanageable, and most irreclaimable types of humanity.

Dr. Thomson, late Resident Surgeon to the General Prison for Scotland at Perth, supplied some very startling statistics on this subject from his experience there. He found that of the habitual female convicts 1 in every 36 became insane, which is a liability to insanity about ten times greater than in the ordinary population; further, that of 6,000 prisoners, excluding those classified as insane, 1 in every 8 was mentally defective, and that in the great majority the defect was congenital. Perhaps the views represented by these figures may be regarded as extreme, but they abundantly prove, what the testimony of all medical officers of prisons confirms, that the degraded and vicious class of our population, from which convicts are chiefly derived, is largely tainted with insanity; and that the habitual criminal, with his low cunning, animal passions, blunted moral sense, and vicious habits, readily degenerates and becomes weak-minded or insane.

Weak-minded criminals are found, as we might expect, to be specially addicted to crimes of reckless passion, hatred, and revenge. Although much wit is proverbially allied to madness uncontrolled emotion is a much nearer ally.

Against criminals of this class the ordinary legal penalties are powerless; they are received with indifference, however frequently repeated, and seem to harden, rather than to ameliorate or deter. For such cases, when all means of amendment have been tried in vain, the course at once kindest to them and safest and most economical for the public would be their committal permanently to the insane department of

prison. It is humiliating and sad to be compelled thus to minimise the evil rather than develop the good of a human life; but experience proves that in such persons good can be developed only when the temptations and opportunities of evil are withdrawn.

When such criminals come within the grasp of the law their madness is sometimes obscured by the crime to which it had prompted. The insanity unrecognised at the bar may afterwards be detected in prison, but it is unsatisfactory and cruel both to the lunatic and his friends that through our blindness he should be treated as a felon.

There is indeed urgent need for wiser and wider views as to the connection between depravity and mental weakness, that we may if possible distinguish the results of each, and in dealing with them may avoid on the one hand a sentimental and dangerous leniency towards crime, and on the other the cruel punishment of disease. But human justice must be rough and imperfect at the best. We cannot estimate the baneful power of inherited tendencies to crime, nor of vicious training in early years. We cannot detect hidden motives and temptations, nor measure the will and the power to resist them. Perfect knowledge is essential to perfect justice. Therefore is it most needful, as it is most comforting, that the final Judge of men should be the Omniscient God.

The Relative Increase of Wages, of Drunkenness, and of Crime during the Last Five Years in the Central Mining Districts of Scotland. By DAVID GIBB, Medical Officer of Health to the Monkland Iron Works.

THE subject is one of considerable perplexity and anxiety—perplexing because of the many aspects by which the subject may be viewed, and of anxiety from the difficulties which present themselves to the proper solution of so important questions, which statistics too plainly and too painfully indicate need a remedy.

The period I have taken for the purpose of obtaining those statistics on which the following remarks are made, embraces two and a half years of what may be regarded as a period of ordinary trade prosperity, while the other or latter two and a half years may be taken as an extraordinary or exceptional period of prosperity throughout the coal and iron industries of

Lanarkshire; and the districts selected—namely, the Hamilt Wishaw, Motherwell, Airdrie, and Coatbridge districts of county—may be held to represent the chief centres of th industries in Scotland.

Beginning with statistics pertaining to 1869, I find t average rate of wages during the year to have ranged for c liers, 4*s.* 6*d.*; furnacemen, 6*s.*; puddlers, 6*s.* a day, or eq per week of six days to 27*s.*, 36*s.*, and 36*s.* respectively, a during the same year the state of crime or offences committ through drunkenness, with relative fines and forfeits paid, have stood as follows:—

	£	£	
HAMILTON DISTRICT, INCLUDING WISHAW DIVISION:			
Assaults	—	—	133
Breaches of Peace	—	—	275
Drunk and Incapable	—	—	55
Total	...	...	—463
Fines, &c., received	88		
" " Burgh of Wishaw	87	—175	
BURGH OF HAMILTON:			
Assaults	—	—	40
Breaches of Peace	—	—	176
Drunk and Incapable	—	—	88
Total	...	...	——304
Fines, &c., received		87	
AIRDRIE DISTRICT, INCLUDING COATBRIDGE DIVISION:			
Assaults	—	—	244
Breaches of Peace	—	—	410
Drunk and Incapable	—	—	42
Total	...	...	——69
Fines, &c., received		300	
BURGH OF AIRDRIE:			
Assaults	—	—	126
Breaches of Peace	—	—	339
Drunk and Incapable	—	—	174
Total	...	...	——63
Fines, &c., received		195	

The tables of statistics pertaining to the remaining years, being arranged similarly to the above, the following stract table embracing the whole five years affords a vie the relative state of drunkenness, crime, and wages during period referred to.

In Airdrie and Coatbridge District.

—	1869.	1870.	1871.	1872.	1873.
Crime, &c. (Convictions)	1,335	1,775	1,894	2,818	4,402
Fines received . .	£495	£562	£606	£1,304	£2,669
Wages, per day . .	5/	6/	7/	8/	11/

In Hamilton, Motherwell, and Wishaw Districts.

—	1869.	1870.	1871.	1872.	1873.
Crime, &c. (Convictions)	763	1,194	1,556	2.289	2,754
Fines received . .	£262	£250	£522	£906	£1,573
Wages, per day . .	5/	6/	7/	8/	11/

In the Airdrie and Coatbridge districts, for instance, while statistics of crime, &c., in 1869 stood at 1,335 convictions; and fines at 495*l.*, with wages averaging 5*s.* a day, during 1872, crime, &c., increased to 2,818 convictions; fines to 1,304*l.*, with wages averaging 8*s.* a day; and during 1873, when wages had reached their zenith at 11*s.* a day, crime and drunkenness increased to 4,402 convictions, fines to 2,669*l.*, or equal to an increase in crime of 111 and 229 per cent., of fines to 163 and 437 per cent. respectively, during those years, over 1869.

In the Hamilton, Motherwell, and Wishaw districts, again, in 1869, with wages averaging 5*s.* a day, crime stood at 767 convictions, fines at 262*l.*; during 1872, with the average rate of wages at 8*s.* a day, crime stood at 2,289 convictions, fines at 906*l.*; and during 1873, when wages reached 11*s.* a day, crime stood at 2,754 convictions, fines at 1,573*l.*, or equal to an increase in crime of 200 and 260 per cent. of fines to 245 and 500 per cent. respectively, during those years, over 1869.

The statistics which are here given represent only so much of the appalling evils of drunkenness as come before the public eye. I am assured, on the authority of the police connected with the Airdrie district of the county, that between 20 and 30 drunk and incapables are taken in charge by the police in that district weekly, detained overnight in the police-office, and set at large again in the morning.

With such an amount of clear and decisive evidence brought to bear upon the connection between drunkenness and crime, it may not be uninteresting to notice the state of pauperism in these districts during the five years referred to.

Pauperism relieved during the last five years in the several parishes included in the districts referred to in state of crime, &c., &c.

Parishes.	Population as at 1871.	English relieved from 1869 to 1873.	Scotch relieved during the same period.	Irish relieved during the same period.	Total number relieved during the same period.	Number of vagrants relieved to total.	Decrease of pauperism of 1873 below 1869.
							p. cent.
Avondale . .	5,460	33	2,356	578	2,967	934	30
Bothwell . .	19,202	28	6,134	853	7,015	1,818	29
Blantyre. . .	3,472	3	731	23	757	139	12
Cambusnethan.	20,326	42	7,485	2,668	10,195	4,239	27
Cambuslang .	3,740	1	1,278	225	1,504	336	18
Dalserf . . .	7,341	13	2,654	257	2,924	1,478	45
Dalziel . . .	9,175	72	969	444	1,485	490	40
East Kilbride .	3,861	11	454	224	689	154	40
Glassford . .	1,430	6	717	39	762	117	43
Hamilton . .	16,803	57	4,390	1,339	5,786	1,990	7
New Monkland.	22,752	130	7,264	4,964	12,367	3,798	20
Old Monkland.	34,073	124	10,043	3,012	13,179	4,052	11
Shotts . . .	8,353	13	1,799	1,123	2,935	1,229	13
Stonehouse . .	3,177	3	1,124	76	1,203	291	28
Total . .	159,195	540	47,398	15,825	63,763	21,065	26

Per cent. English relieved to population, ·3; Irish, 10·; Scotch, 30·. Total pauperism relieved, 63,763.—Per cent. English to do., ·8; Irish, 25·; Scotch, 74·. Of total number relieved 21,065 were vagrants, or equal to 33 per cent.

During those years of an almost unexampled prosperity of trade in the districts under discussion, it is worthy of note that throughout the whole of the districts the average decrease of pauperism was 26 per cent.; and it is still further worthy of note that in the rural or agricultural divisions of those districts, pauperism decreased from 40 to 45 per cent., while in the immediate centres of the coal and iron industries, where work was abundant and wages were so high, such as in the parishes of Old and New Monkland, Shotts, Hamilton, &c., it decreased only some 14 or 15 per cent.

THE EFFECTS OF THE RECENT HIGH RATE OF WAGES ON THE INDUSTRIAL, SOCIAL, AND MORAL HABITS OF THE WORKING CLASSES IN THE MINING DISTRICTS.

In submitting any observations upon these points, it must always be premised that, although the statistics presented, the opinions obtained from parties in a position to judge, and the observations made in the course of my own professional duties,

may compel a verdict to be pronounced in opposition to the idea that the high rate of wages has been wholly beneficial to the working classes in those divisions of the county representing the central mining districts of Scotland, there are yet still some, if not a considerable number, who have most carefully husbanded their extra earnings, and have laid aside out of them what will afford them tolerable comfort when longer unable to work, and, in some cases, what will procure for them the chance of raising them out of the ranks of the employed into the position of employers. Such cases are known to the writer of this paper, and to others with whom he had conversation upon the subject. Still, he feels compelled to tender the remarks he does, believing them to afford a true representation of the actual position.

First, In regard to the 'industrial' result of the unprecedentedly high rate of wages which obtained for the latter two and a half years of period selected in the text, the reader is constrained to believe that it has been almost wholly disastrous, and that in the case of the better, as well as the worse, class of workmen. Over the whole body of the operative classes in those districts, at least, observers must notice that there has spread a perfect impatience of the essential industrial conditions, when labour was in large demand and could be readily disposed of. There was a blind and childish impatience displayed of the least exercise of that authority which the employer must exercise over the employed. Instead of the employer being, as he used to be called, 'the master,' he was for the time forced into the position of being the servant of the employed, compelled to conduct his business at their dictation, rather than they do their work in conformity with his orders. We were all in the habit of hearing employers, who were in any way hampered by contracts, saying that they were afraid to speak to their men, or were able to do so only at the risk of being left without men to execute their contracts at all. This petulant conduct on the part of the employed too often ended in bitter hostility between them and their employers, and by it, not unfrequently a short industrial war was declared, the result being that pits were stopped and ironworks shut up for a week or two at a time until their whims were adjusted. These frequent hitches—and frequently about very little—had the effect of deranging trade, and ultimately in inflicting incalculable loss not only upon the parties engaged in the contention, but upon the whole community, for there is always a deadening influence depressing industry, so long as antagonism of interest is allowed to take the place of mutual sympathy and co-operation between em-

ployer and employed. It is undeniable that the workman has duties towards his employer, the neglect or languid or reluctant performance of which almost entails a corresponding dereliction on the other party, or at least surrounds his obligations with needless difficulties. Through obstinate wilfulness the workman often thwarts—through unwarrantable and ill-founded mistrust he often baffles—the most sincere and earnest efforts of his employer to serve him and to raise him. Surely, if, in place of this perpetual antagonism of interest between employers and employed, the mutual duties of springing out of this relation were on both sides to be faithfully performed, there is nothing in it necessarily humiliating to the one party or oppressive to the other. Men are not degraded by the exercise of a power, or debased by the habit of obedience; it is only by the exercise of a power which they know to be illegal, and by obedience to a rule which they consider to be oppressive that becomes them to resent it, as an infringement upon their rights as men, and their privileges as members of a community. It is not correct to say that when the price of labour becomes reduced through scarcity of work, that this disturbance in the conditions of industry will abate and cease. Such is not the case—The dragon's teeth are more easily sown than eradicated from the soil—a spirit has been evoked, which we have already seen, that those who raised it are not able to allay, and it may take a generation of disaster to teach anew to those interested, that if trade is to be preserved to the country, it can only be on the condition that other forces than the interest of the manual worker are required to make up a resultant which shall be beneficial all round. Another disastrous result that has ensued to the conditions of labour is that the largeness of wages earnable caused less work to be done by the individual worker, rather than the abundance of work and press of orders conspiring to render everybody more busy. The colliers thought they had discovered the means of enriching themselves; and they demanded more wages, which in most cases they got. Then they pushed the matter still further. As they could earn more wages in three days than previously they could earn in a week they would only work three or four days, and openly declare that working short hours means getting less coal, which again means higher prices and higher wages. The mere restriction of output as a means of keeping a steady demand and a good wage, is the most prodigious fallacy in political economy conceivable. Idleness, if not laziness, became in time, too, a strong habit in the nature of these men, especially of the young, and we know the proverb, that when man is idle, a certain ol

gentleman is always busiest. I have no hesitation in affirming that thousands of these workmen, so long as they had a shilling in their pockets, would not work; and while they lounged about the corners of streets in listless idleness, or grouped here and there over fields, in tens and twenties, playing at cards all day, many and keen have been the sufferings of their wives and families at home; and habits, when once formed, acquire a very rigid and unbending sway, whether for evil or for good. 'Habit,' says Carlyle, 'is the deepest law of human nature, it is our supreme strength, if also in certain circumstances our miserablest weakness, it is our primal fundamental law; habit and imitation—there is nothing more perennial in us than these; they are the sources of all working and all apprenticeship, of all practice and all learning in the world.' And it is on this philosophy that Solomon directs us to turn the footsteps of the child into the path in which we wish the man to walk. Of the innumerable instances I could cite to show the total disregard many of them had for their own self-respect or manly pride, it is not long since I had to grant an order on the cash clerk of one of the works for which I act as medical attendant, asking him to advance 10*s.* to a collier, whose family consisted of his wife and two little children, one of which had died, and whose income was 11*s.* a day, to enable him to procure a coffin for his deceased child, and who, had he worked only five days a week, and 7 or 8 hours a day, could have made not less than 2*l.* 15*s.* a week, upon which he had only to support his wife and child. That such a state of things should exist is both a painful and humiliating fact. We boast of our Christianity; we pride ourselves in our civilisation; we are perpetually complimenting ourselves upon the industry of our population; and yet with all this, and the wealth of the world pouring in upon us, we have a pauperism and demoralisation that make us a bye-word among the nations of the earth.

In respect of the social results, it may be safely affirmed that, except in the case of those much below the average, that the effect was in many respects (for the time being) favourable—better furniture, better clothes, better food were procured. But the other aspect is that in most instances—and they predominate—there was much extravagance in expenditure indulged in; the money, easily won, went freely. Marrying and giving in marriage of mere boys and girls went on for a time at a rattling and rapid pace, and the question is—Have habits not been formed which harder times will only cure through much suffering, especially in the case of those who, on the strength of good times, contracted, as so many did, those early

marriages, and who scarcely knew what hardships were, money being then so abundant that a generation of hardships may yet again be required to bring things to their normal state. However painful the fact, it cannot be denied that the most wanton prodigality was seen to prevail.

Where men's ideas of life are low, and their notions of individual and social duty are weak, the comforts and other domestic relations of those who are dependent upon them enter to only a small extent into their consideration; and as too often happens, higher earning, so far from benefiting the miner and ironworker and their families, as has been seen, in many cases only proved a source of demoralisation, by furnishing them with increased means for recklessness and animal gratification. This state of things is deeply to be lamented, for the frugal use of money so hardly earned—and by these workmen it is hardly earned indeed—is one of the most cardinal duties devolving upon the heads of families; for when rightly earned, it is the representative of patient industry and untiring effort; of temptation resisted and hope rewarded; and when rightly used, it affords indications of prudence, forethought, and self-denial—the true basis of manly character. Home influences, too, have much to do in attaining to this desiderated state. There is domestic purity and moral life and example in a good home, and individual defilement and moral ruin in a bad one. To secure domestic comfort and social independence to the working man and his family needs neither superior courage nor eminent virtues: they can be realised with an expenditure of ordinary energy and the capacity of average minds. It is but the spirit of order applied in the administration of domestic affairs, of the power of resisting present gratifications for the purpose of securing future good, and in this light it represents the ascendancy of intelligence and reason over the grosser instincts.

In regard to the 'moral' effect, I do not believe that the high wages have done anything whatever to reclaim an immoral man. I do not know one case. On the other hand, where the immoral tendency existed, the abundance of wages has done much to stimulate and aggravate it, as the statistics of crime, &c., in the table I have compiled very clearly show; and it is to be feared, for the facts have been patent to everybody, that the money coming so easily, and in such quantity, into the hands of lads, and even boys, has tempted many of them into bad habits, which may grow with their growth, and strengthen with their strength. Streets often, I am sorry to say, presented

the sight of boys in their teens much under the influence of drink—similarly with all the vices commonly indulged in.

It is notorious that of all the agents which betray man into the neglect of those duties which his moral and physical constitution demands, alcoholic drink stands pre-eminent. In all ages of the world it has carried on an incessant war against morality and virtue, and still continues to wield an influence subversive of the highest interests of the human race, dethroning the reasoning faculties of man, and exalting to supremacy the lower propensities of his nature; thus forming one of the most certain causes of moral turpitude, and entailing upon its victims all the horrors of a debased and brutalised state of mind. When the effects of drunkenness are so disastrous in their moral results, it must appear a truth already established that it is a powerful incentive to crime. In the very nature of things, it cannot possibly be otherwise. Man by indulgence in drink is forming habits which enfeeble his physical frame, enervate his mind, and unfit him for maintaining a successful encounter with the common ills of life; and while he fosters those habits and pursues this ruinous career, his prospects every day become darker, and his difficulties more insurmountable. The vice to which he is enslaved acts and reacts, and in every conceivable way operates against him. Not only are his means reduced by the amount of time and money squandered in dissipation, but his expenditure becomes augmented by the ever-growing desire for drink which goads him on to his ruin, as the many dreadful cases of crime from the Airdrie district to the Circuit Court so painfully testify. No one for a moment will attempt to controvert the statement which our municipal and parliamentary returns show—that two-thirds of all the crime, three-fourths of all the pauperism, and a corresponding proportion of juvenile delinquency and social evil, are not the accidental but the necessary results of drunkenness. Writing on this subject, Sheriff Lees, of Airdrie, says that, 'what the men who work in the pits and at the furnaces require to be protected from is —from themselves.' They constitute the mass of the population in the district, and give its character to it. When they are sober, he has almost invariably found them manly and obliging; but it is unfortunately impossible to avoid seeing that many of them when intoxicated become quarrelsome to the last degree, and brutally abusive. 'I have scarcely tried,' says the learned gentleman, 'a single crime of violence in this district that has not been caused or characterised by drink. High wages have as yet, in this locality, led to a great increase of drinking and consequent crime.'

My conviction is—and it is coincided in by all the working men's wives to whom I have spoken on the subject—that a moderate wage, sufficient to provide comfortably for reasonable wants, but requiring regular and steady work to earn, is in every respect best for the working man. My experience is, that the men whose wages did not rise to any great extent were as comfortably well off, and were healthier and happier, than the bulk of those who had inflated wages; or, if they suffered any hardship, it was from the fictitious prices to which exceptional wages forced provisions.

This high percentage of crime in districts where the working men were earning so large wages proves that all remedial measures yet suggested have been of little avail. Christianity and philanthropy have not yet practically developed a scheme for the amelioration of this degraded state of humanity, or erected a barrier sufficient to stem the tide of abounding drunkenness and prevailing crime. It is greatly to be deplored, then, when working men have all the benefits of high wages and short hours, that a great portion of their money should be spent in dissipation and a total waste of their energies, independent of the loss of time that might be profitably occupied in healthy recreation alike of body and mind.

Happily for the future of the country, it is possible to call into activity many agencies which are capable of securing the desired social moral advancement of the working man. Amongst those agencies, it is scarcely necessary to remark that a position of first prominence should be given to education. The better education of the masses would secure a most important moral and material advancement; labour would be rendered more efficient; the whole community would in this way become enriched; and prudential habits would probably be so much more generally diffused that the additional wages enjoyed would not be squandered, as they doubtless have been, but would represent a permanent benefit upon the country. It will thus become obvious that as intellectual and moral faculties become more generally developed, there will be a prospect of remedying some of the gravest defects in our present industrial economy, because if a man seeks sensual indulgence as the great end of his existence, reason is lost upon such a one, until he can be shown his folly; but such folly must cease when men appreciate their true interests, for if man were only to act as becomes the dignity of his character, and seek enjoyment in cultivating the higher and better faculties of his nature, instead of the brutal, it would vastly enhance human happiness, and reduce our enormous wasteful expenditure, which involves so

much time to replace it, and it would bring him more in harmony with the position his Maker intended that he should occupy. A man devoid of the elements of education greatly limits the area of his enjoyment. It cuts him off from many of the truest and most lasting pleasures; all literature, all science are closed to him. Many things which to one who is fairly educated are blessings fruitful of good, often become to one who is ignorant positive misfortunes. Spare time hangs so heavily upon those who are unable to read, that in order to get rid of it they often have no other resource but the public-house.

If the influence of religion is to be brought to bear with any effect upon such a class, it must be in addition to pulpit oratory, where human vices are so uniformly and so ably reprehended and condemned. Ministerial visitations and mission work we believe to be more efficacious than all pulpit declamations against the inroads of vice and drunkenness, however eloquent and persuasive. Better dwellings, too, cannot fail to be an important agency in this direction, for where the sexes of all ages are huddled together in one apartment, it is impossible for modesty and virtue to sway their refining influences over our natures which they otherwise would do.

MISCELLANEOUS.

Dr. ALEXANDER ROBERTSON, Physician to the Town's Hospital and Asylum, Glasgow, read a paper 'On the necessity for further legislation for Mental Disorders resulting from or characterised by excessive indulgence in Alcoholic Liquors.'[1] After some few observations on the importance and difficulty of the question, and the attempt at legislation in the Habitual Drunkards' Bill, he expressed his belief that, though it was a failure, the difficulties of the problem were not insuperable. The bill, it was shown, failed to distinguish sufficiently between the intoxication which is voluntary and that due to a clearly diseased state of the nervous system; and the conviction was expressed that, in attempting to legislate on the subject, it is necessary to draw a line of separation at this point. Special reference was made to the varieties of mental disorder, not amounting to ordinary unsoundness of mind, associated with the excessive use of alcoholics; and they were briefly illustrated as follows:—

1. There is an ephemeral or transitory mania which arises in some constitutions after an excess in alcohol, generally

[1] See *Transactions*, 1870, p. 276.

not of long duration. The following illustration will show its characteristics. A stout young labourer in a state of mania was brought to the city parochial asylum securely handcuffed, and under the charge of four strong policemen. It was stated that he had been very violent, and had inflicted a severe blow on the head of one of his guardians. The next day he was calm and rational, so well, in fact, that the legal documents for his detention could not be completed, and it was necessary to discharge him the day following. He stated that he had been taking a considerable quantity of whisky on the day preceding his excitement. 2. Delirium tremens, whose symptoms are so well known, sometimes closes a drinking-fit; at other times arises in the habitual tippler after an unwonted indulgence, or after an injury more or less severe. In most cases recovery takes place in four or five days. 3. In some persons of confirmed drunken habits, after drinking somewhat more than usual for a short time, a monomania of suspicion and fear, accompanied by hallucination, is developed. Dangerous tendencies are also apt to show themselves in this form.

The last form, and the most important in relation to our subject, is Dypsomania. It has two varieties: one of them is characterised by an uncontrollable craving for alcohol, recurring in paroxysms occasionally at considerable intervals. It is usually preceded by an uncomfortable feeling of depression. Then comes the thirst for alcohol. It is gradually taken in increasing quantities, nothing now restrains the unfortunate victim of this tyrant appetite. The time comes, however, when, should delirium tremens not have been developed, a loathing at alcoholic stimulants arises, and a painful process of recovery sets in, which may last for a time.

Obviously, there are many cases in which it must be difficult, if not impossible, to distinguish between especially the latter variety and ordinary drunkenness. While admitting this, and putting them aside, there remains still a large class who are really not free agents, in whom the craving is irresistible. The voluntary drunkard, tempted perhaps by his boon companions, drinks for the sake of enjoyment, and can abstain, if he so resolve. The dipsomaniac, impelled by the tyrant force of his diseased organisation, is powerless to resist, and will have alcohol, if it be possible for him to get it. He takes it for its own sake, and it matters not where; whether it be with others or by himself; most frequently it is alone.

It was shown, in regard to dipsomania, the chief of these varieties, that, though in many cases it can with difficulty be distinguished from drunkenness as a vice, in

a very large proportion the diagnosis is easy. Thereafter, the inefficiency of existing provisions for the care and treatment of these less pronounced kinds of mental disorder was dwelt on; and then the course most likely, in the writer's opinion, to meet the requirements of the case, was pointed out. Nothing but prolonged abstinence from alcoholic liquors will suffice. This ought to be in special establishments, to which such persons should be committed for a period of not less than three months nor more than a year. The experience of such institutions in America is very valuable. The results, however, both there and in this country being rather uncertain, it is counselled simply to make it legal to confine the class referred to, and not, in the first instance, to seek to expend public money in the working out of the system. Private enterprise would provide houses (old mansions) for those belonging to the middle and upper classes, who would willingly pay for themselves in many cases. Philanthropy would assist in making provision for the more indigent classes; and after public confidence was established in the measure, Government would be justified in asking for a vote of public money to develop it generally throughout the kingdom. The legal process believed to be most likely to produce public confidence, that none but proper subjects are committed to such institutions, was briefly treated. This, in Scotland, should be an inquiry before a sheriff, the individual concerned being present, with counsel, if he choose. Two medical witnesses, one of whom might be appointed by the sheriff, should declare on oath that the person sought to be confined was labouring under the one or other of the special forms of mental disorder described in the paper when they examined him; and, in addition, other witnesses (one or more, besides relatives) should show that, during a period of at least six months immediately before the inquest, he had been repeatedly dangerous to himself, or incapable of managing himself or his affairs. Such inquests would not be very frequent, as the great majority, like in American institutions, would probably enter voluntarily, rather than have themselves, their friends, and their affairs exposed in a court of law.

A paper by the Rev. DANIEL ACE, D.D., of Laughton, Lincolnshire, 'On the Increased Discriminate Aid required for Discharged Prisoners, in order to repress the repetition of Crime,'[1] was read. Dr. Ace, having shown that the object of

[1] See *Transactions*, 1863, p. 422; 1864, p. 243.

punishment was two-fold, being both deterrent and reformatory, contended that, while much had been done to carry out the first object, very little had been accomplished to forward the latter. The Rev. Doctor observed: We have studded the country with gaols of huge dimensions, we maintain ungrudgingly thousands of indispensable vigilant policemen; but vice has not, to any perceptible extent, been diminished, and the too frequent re-committals of criminals have not only added to the national expenses, but also to the increased deterioration and misery of culprits. Hence the necessity of the existence of Discharged Prisoners' Aid Societies everywhere a gaol is erected. Testimonies from chaplains and governors of gaols were adduced that re-committals tend to harden criminals; no demonstrative evidence that accumulative punishment *per se* is sufficiently efficacious and sufficiently deterrent. The moral sense of criminals must be reached to effect reformation. Humanise and Christianise degraded captives. As a rule, prisoners are simply brutalised, and you must do something more than punish: seek afterwards to reform them, not abandon them Of 8,362 male convicts, 1,700, or 20 per cent., may be enumerated as invalids, lunatics, weak-minded, or incapable of earning a livelihood. Of 1,300 female convicts, 225, or 17 per cent., may be considered as being similarly incapable of obtaining the means of subsistence. Consequently, a large percentage of those discharged criminals, nearly two-fifths, must necessarily, whilst they exist, be a burden to society—a charge on the nation. The exceeding usefulness of the Charing Cross Discharged Prisoners' Society has been fairly and fully attested, and is deservedly entitled to Government support. The origin, legislative sanction, and advantages of Discharged Prisoners' Aid Societies were commented on and elaborately demonstrated. The earnings of prisoners on discharge, he said, amounted to 3*l.* in some cases, with extra gratuity, but in no case, even with earnings, to exceed in the whole the sum of 6*l.* This amount is now placed in the hands of the treasurer of one of the Discharged Prisoners' Aid Societies, that such a little boon may not be squandered, but utilised for a new start in life. Hence the absolute necessity of the extension of Discharged Prisoners' Aid Societies as correlatives to gaols wherever existing. He advocated a new, improved, and uniform register of recommittals, and a central industrial establishment for discharged prisoners, to be aided by Government.

Mr. D. Marshall Lang, of Glasgow, read a paper on 'Local Institutions and Agencies for the Prevention of Crime

and the Reformation of Criminals.' Beginning with the House of Refuge, which was founded in 1838, he traced its history and gave an account of the system of management. The number of inmates in both houses at the present date was 243—namely, 98 in the girls' and 145 in the boys' house. He suggested that the short imprisonment which was at present undergone before a little culprit could reach the reformatory, and which had always been so repulsive to the Scotch spirit, should be abolished, and that all children charged with crime should be sent, without the prison brand, to their proper destination, the reformatory, leaving the industrial schools more free to develop fully their mission of caring for non-criminal waifs. He noticed next the industrial schools, narrating the principal features in their history. No difficulty, he said, had ever been experienced in obtaining suitable employment for both boys and girls, and their conduct, so far as it could be ascertained under a careful supervision for three years after their discharge, was not inferior to that of the average of young persons taken from well-conditioned working-class families. Of 197 boys discharged in 1870-72, 118 were reported or known to be doing well, 18 were doubtful, and 10 had been behaving badly. Of 102 girls finally discharged in 1870-72, 91 were reported to be doing well, 5 were said to be of doubtful character, and 6 could not be traced. Passing on to speak of the Clyde industrial training ship, he stated that since this vessel was fitted up in 1869, 727 boys had been received, of whom 386 had, when discharged, found regular and remunerative employment as ordinary seamen and apprentices. Of those who left the ship during 1870 to 1872, 171 were reported to be doing well, 15 to be doubtful, and only 2 to have been convicted of crime. Leaving institutions whose object was to benefit the young, he proceeded to call attention to those whose sphere of prevention and reformation lay among adults. He spoke first of the Magdalene Institution, describing its leading features and mode of working. Its object was, first, to seek by all competent means the suppression of the resorts of profligacy, and to show the success which had attended efforts in this direction, he quoted from the criminal returns of the city that while in 1870 there were in the city 204 houses of ill-fame, there were in 1873 only twenty, while the aspects of the streets had been much improved; the second object was to provide temporary homes for penitent females; and third, to afford protection and assistance to women in imminent danger of being led astray. For effecting these objects the society had a reception house in the city, where all applications for admission were made personally, and in which

a probation of four to eight weeks was undergone. The sincerity of a desire for reformation being tested, the inmates were drafted to Lochburn House, where they were carefully trained in secular and religious knowledge, and engaged in industrial work. The necessity for education would be judged from the fact that a fifth of all those admitted last year could not read, and a half could not write, while a third had never attended even a Sunday-school. The usual residence in the house was two years, and employment was found for the inmates as they left the house. Since 1859, 2,012 women had passed through the house. Of these 775 had formerly been in domestic service, 750 had been employed in public works, 1,639 were orphans, and 835 were under 18 years of age when admitted. About 60 per cent. had, after residence, been placed in respectable situations or restored to friends, and careful inquiry showed that over 30 per cent. of those who could be followed had been truly reclaimed. The number of women in both houses is at present 137. Two institutions cared specially for discharged prisoners—one solely for females, the other for males. The usual number of inmates in the House of Refuge for Females was 36, and the average annual expense was 480*l.*, of which about 260*l.* was earned by the inmates' industry. Applicants of any age were eligible, and of the 40 who passed through the house annually about one-half were satisfactorily accounted for. The other agency was styled the Prison Aid Society. The number of persons assisted by this Society in 1873 was 63—33 males and 30 females. Of these, 17 were placed at work in or near Glasgow, 18 were sent to a distance, 15 were restored to parents, 4 received into other institutions, and 4 were recommitted to prison. The total number assisted during the past eight years had been 301. Of these 24 had been reconvicted of crime. In addition to their ordinary work, the Society had lately arranged to assist through a special agent any convicts who elected to come to Glasgow on the expiry of their sentences elsewhere. Of 26 cases dealt with in 1873, only two had returned to their old habits. The Night Asylum for the Houseless was next noticed, and it was stated that the number of individuals who in 1872 found shelter in the institution was 29,174, the nightly average being 80; 9,859 were natives of Glasgow, and 19,365 strangers. Attached to the Night Asylum was the House of Industry, which was designed to provide a temporary home for houseless and friendless females of respectable character. Needlework was provided for the inmates, their earnings belonging to themselves, less the cost of their board. The average number in the house was 30.

A paper was read by Dr. JOHN BRAKE, being a 'Sketch f Gaol Management in the Central Provinces of India, with eference to the housing, classification, employment, and educaion of prisoners.'[1] Dr. Brake alluded to the very limited cquaintance with Indian prisons, and the incorrect views commonly held concerning them, by persons in England. He elected four points as open to useful discussion.

1. The housing of prisoners and their classification.
2. The labour imposed.
3. Punishments and rewards for conduct in gaol.
4. Education of prisoners.

After pointing out the fluctuation of gaol population during the last few years, he selected the lowest daily average, namely 2,745 in 1871. This number was made up of 126 under trial, 67 Civil and Revenue, and 2,552 convicted prisoners. Of the last 64·2 per cent. were imprisoned for periods not exceeding six months, and only 11·16 for periods exceeding three years, including 26 per cent. sentenced to transportation beyond sea. With the exception of about 30 selected young able-bodied and healthy murderers sent yearly to the Andaman under sentence of transportation for life, all prisoners are kept within the province; and the three largest gaols, two of which can accommodate 1,000 each, are used as transportation gaols, besides receiving the short-term prisoners of the districts in which they are severally placed.

All the gaols were described as surrounded by high walls, and in themselves consisting of large, strong, masonry barracks, with high open iron gratings in the doorways, and numerous window openings allowing of free perflation. The barracks are only used at night, the prisoners working in the open yards and worksheds during the day. Numerous internal walls are objected to owing to the extreme heat, the thermometer in the shade rising to 112° in all, and to 117° in some of the stations, whilst the radiation thermometers exposed to the sun show temperatures as high as 167°.

Besides the large barracks, each holding from 10 to 30 prisoners, there are solitary cells which the writer considered should be more numerous than they are, though during the extremely hot seasons they cannot be safely occupied. To separate the male prisoners during the night, each has to sleep on a separate berth, raised on an arch 2½ feet from the floor, sloping from head to foot and so arranged that the head of one man is in a row with the feet of his nearest neighbours on either side.

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[1] See *Transactions*, 1868, p. 364; 1872, p. 236; 1873, p. 314.

There are one or more convict officers in each ward, who are held responsible for the good conduct of those under their charge. During the whole period of his connection with the gaols, Dr. Brake has not had a single complaint that would lead him to believe that this arrangement was not satisfactory.

All the new prisons are after standard radiating plans. A number of yards, each containing a barrack of one or more wards, worksheds, bathing places, and other necessary buildings, and separated by radiating walls all opening into a central court. In the large gaols the number of these barracks admits of very fair classification, but in the smaller ones, as there are only six yards, little can be done beyond separating long-term prisoners from the short-termed, and so arranging the distribution of sleeping berths that a prisoner of the first class is brought next to a prisoner of the second rather than of the third or fourth classes, and so on. All the longer-termed prisoners, however, are transferred as soon as possible to the larger gaols.

Of the six yards one is given up to men under trial, a second to civil male prisoners, a third to the hospital and dispensary; two to convicted males, and the last to females, under trial, civil and convicted. This arrangement has been persistently objected to. First, the keeping together of the three classes of females; and secondly, the confining of the civil male prisoners and those under trial within the criminal gaols. It was pointed out that the under-trial prisoners were not only those committed to sessions but those still under examination by a magistrate, and often kept for days and even weeks to be acquitted of the charge at the end. Houses of detention have been urgently asked for and some provided, but the necessity for them has been denied by the Government, and those formerly in use have recently been given up.

The classification is according to race, sex, age and crime. Europeans and Eurasians are kept apart from Asiatics and Africans, but the numbers are very insignificant. Females are separated from males in all cases, and in the larger gaols are under the charge of female warders, who are also work-instructresses. The number of juveniles under twelve is not great. In 1871 there was an average of 86 males and 20 females. The young girls are of necessity confined with the older women—doubtless to their utter ruin; but special consideration has always been paid to the segregation of boys. In all gaols these are kept as much apart from adults as possible, but in their education and instruction in various handicrafts, it is found impossible without a special establishment to keep them

altogether away from other prisoners. In 1869 a Reformatory for boys was started at Naypoor under the impression that an existing Act authorised magistrates to apprentice criminal boys to the Superintendent of the Reformatory, but it was subsequently ruled that this Act did not apply and the Institution was closed, to the great regret of the writer.

The convicted prisoners are divided as to crime into four classes.

1. Those convicted of murder and the severer crimes against the person.

2. Offenders against the State, public justice, and religion, and those convicted of the less serious crimes against the person.

3. The more serious offenders against property.

4. The less serious offenders against property.

This classification holds until the prisoner by extra labour and the necessary good conduct has earned special distinction, evidenced by the number of good conduct marks obtained. When space will admit, those who have earned 100 marks are removed from their fellows, and from them convict officers are elected. These last are, as a rule, much more trustworthy than paid officers.

In India there is no objection offered to the profitable employment of prisoners, the difficulty being to find remunerative labour that will at the same time be sufficiently punitive. A very elaborate scale of task work is prescribed in the Central Provinces, embracing a vast number of occupations, from the making of Turkey carpets to the shaving of prisoners and performing the menial duties about the gaol; and including such heavy work as oil-pressing, digging and carrying earth, sawing, &c. But the writer does not subscribe to the popular view that great muscular exertion is the most severe form of punishment, believing that a labouring man would rather carry loads of earth and such like than be set down for ten hours within the gaol walls to spin or weave a fixed quantity that can be closely examined and measured. The employment of small parties of prisoners in mending roads and such like extra menial work, is strongly deprecated. The whole imprisonment up to six months should be passed strictly within the gaol walls, all interview with the outer world, to the extent even of seeing any other than the officers of the gaol except under special circumstances, being strictly guarded against, the labour being as severe and deterrent as possible, short of impairing health, the object being to make the prisons places to be thoroughly dreaded, and to which a second visit is to be avoided.

The punishment of 'flogging' for breaches of gaol dis-

cipline is too indiscriminate; and a penal dietary with solitary confinement has been substituted with success for the less flagrant offences. It is considered, moreover, that, whilst punishing a criminal for his offence and separating him from his fellows and the community generally, efforts should be made to return him to society a better man. With this object, habits of cleanliness, obedience, and industry are enforced; handicrafts of all kinds taught, and instruction given in reading, writing, and arithmetic.

A revived system of rewards introduced by the writer received the sanction of the Governor-General in 1871. According to this system a prisoner can earn a remission of sentence, strictly in proportion to his own efforts both in task work and book learning, besides obtaining other rewards and distinctions. The rewards are:—

1. Visits from friends.
2. Exemption from fetters.
3. Good conduct badges, and promotion to some prison office.
4. Money gratuities.
5. Remission of sentence.
6. Present of tools, &c., on release.

These are given according to number of marks gained. Prisoners whose terms exceed six months and are less than life, are eligible for all. Life prisoners to the first four only, and prisoners of six months and under to the first two. Good conduct and general industry are absolutely essential, and do not call for special reward, the absence of them, on the contrary, entailing punishment.

The principle on which marks are given is fixed. A certain task is assigned to each prisoner, which he (or she) is bound to execute. All work beyond this is credited to him, and entered on his labour ticket monthly at the rate of two marks for every extra full day's work performed. Work overseers or convict officers are credited with two shares of the average of the prisoners under their several charge.

These marks will ensure a remission of sentence equal to one day for every five marks so gained, provided that the total remission do not exceed one-twelfth or one month in the year of the original sentence.

Convict officers during their incumbency receive this full remission, but may, in proportion to the extra labour of the prisoners under their charge, obtain a higher number of marks, up to 25 marks monthly, the remission of sentence in their case being limited to one-sixth, or two months in the year of the original sentence.

For all kinds of work for which a money value can be credited to the gaol department, each prisoner is to be credited with one-third of the profit of his extra labour, the money so earned being paid to him on release, or he may remit one-half every six months to his family. In addition, a few tools may be given to him on his leaving the gaol if his general conduct, in the opinion of the Superintendent, have merited this indulgence.

Besides marks for extra work a few are sanctioned for special acts, as assisting in preventing escapes or breaches of gaol discipline, and for improvement in reading and writing; two marks for each may be given monthly, and twenty marks on the prisoner being reported by the Inspector of Education to have acquired a fair proficiency in either within the gaol.

Fifty marks entitle the holder to a visit from friends under the order of the Superintendent of the gaol. One hundred marks entitle him to a good-conduct badge and exemption from fetters. One hundred and fifty marks make him eligible for the third grade of convict officership or work instructor, and higher numbers to superior grades.

The experiment of intermediate imprisonment has been tried with success. Eighteen men who had been confined nearly ten years, and whose sentences were about to expire, were allowed outside the gaol without fetters or distinctive prison clothing. Eight were employed as messengers and guards, and ten as ordinary labourers on the Government farm. The former slept within the gaol walls, but the latter remained on the farm, in a building mainly constructed by themselves under charge of a warder. They were clothed and fed as ordinary labourers by the Gaol Department, and each was allowed any gratuity the Superintendent of the farm considered that he had earned beyond the ordinary wages of a labourer, which were paid to the Gaol Department. These men, without exception, proved trustworthy, willing, and obedient, fully equal to the best of the paid native guards, and better than a large proportion. These intermediate prisoners received the full remission of two months in twelve of their sentence. The results of the new rules for 1871 were as under: Eighteen intermediate prisoners earned 2,929 marks and 605⅘ days remission; 105 convict officers earned 11,382 marks, 2,278 days remission, and Rs14 15 4 gratuity; 327 ordinary prisoners gained 6,951 marks, 1,367⅕ days remission, and Rs129 11 9, or, in the aggregate, 405 prisoners gained 21,262 marks, 4,251 days remission and Rs144 11 1 gratuity, representing an extra cash profit to Government of Rs289 6 2, or, calculating the diets saved, a

saving of Rs566 4 9. The highest remission gained was 45 days, in the case of a thoroughly well-behaved man who had been nearly ten years in gaol.

A regular system of education is carried out in all the gaols. All not physically unfit are set to learn the alphabet and figures up to 100. After mastering these they are promoted to the first class, and instructed in reading and writing, the first book of the educational series, and the first two rules of arithmetic. On passing through these they are promoted to the second class, and instructed in the second book and third and fourth rules of arithmetic. The longer termed prisoners are taken through the higher course as prescribed for village schools, and the officers of the Educational Department kindly assist by advice and periodical examinations. A large number of the prisoners received are so ignorant as not to be able to count beyond four, and the large majority are confined for very short terms. Still, the effort to assign particular values and meanings to combinations of lines and marks is an education of the thinking faculties, and considered desirable; besides which, book-learning is a form of discipline, and one hour devoted to it in the middle of the day, added to the one hour for bathing and dinner, is a wholesome relief from continuous manual labour from sunrise to sunset.

Of 5,473 males and 653 females convicted during the year, 4,914 males and all the females were ignorant of their letters. Of the 4,914 males and 653 females, 1,587 males and 85 females at least learnt their letters and counting up to 100; many mastering easy words, and 139 males and 17 females had learnt so much as to be able to read and write fairly and to understand the simple rules of arithmetic. A large number of the old prisoners have learnt to read and write well in gaol. It is fair to suppose that these would have remained uninstructed but for their admission to prison.

Miss Mary Carpenter, of Bristol, read a paper 'On Reformatory and Industrial Schools for India.' Miss Carpenter said that there are difficulties in the way of reform in India presented by the character and condition of the people, which it is impossible for anyone to comprehend, even faintly, who is not acquainted with them. In all reforms the British Government is scrupulously careful not to interfere in any way with religious or social customs. But granting all this, there are some simple principles without which gaols are not only *un*reformatory, but they are absolutely schools of vice. The fact that education and moral instruction are not

made a part of gaol discipline in India prevents imprisonment from being improving to those subjected to it; but the added and almost universal fact, in addition to this, that numbers of prisoners, sometimes as many as sixty, pass the nights locked up for twelve hours in association, must neutralise any possible good arising from industrial training, and engender vice to a frightful extent. One great difficulty is happily being removed. Native public opinion is beginning to be directed to the subject. Until lately a perfect apathy existed respecting the condition of prisoners, for between the lower and the higher castes of Hindu society there seemed to be an impassable gulf;—the secrets of the prison-house they had no desire to penetrate; and if the evils resulting from the condition of the gaols forced themselves on their notice, they felt an inability to remove, or even to mitigate them. But a great change in this feeling is steadily taking place. Visits to England made by enlightened Hindus awaken an entirely new feeling in their minds; they perceive how we try to reform the most degraded; they see that we never consider any expenditure an obstacle when the diminution of crime is a question. At the last meeting of this Association at Norwich, a very important paper on Indian prisons was read by Mr. C. Sabhapathi Iyah, setting forth the whole subject in a very forcible way, from the actual knowledge he had himself derived from observations made in his official duties as Crown Prosecutor. He earnestly appealed to this Association to bring this subject before the Government. This paper has been extensively circulated in India, and has received a warm response from many of his countrymen. The points on which Mr. Sabhapathi chiefly insisted were: 1. Want of proper gaol accommodation. In the Indian gaols sixty or seventy prisoners often sleep side by side on the ground in one cell, a practice demoralising and injurious to health. There are many other evils connected with deficient accommodation, which cause great insecurity, and an impossibility to carry out a good system. 2. The defective nature of the gaol establishments. 3. The non-introduction of moral training. 4. Want of proper instruction in useful and industrial arts; and 5. The neglect of juvenile offenders.

The same obstacles, Miss Carpenter said, will probably present themselves in this case which did in England nearly a quarter of a century ago, when the public mind was awakening to the necessity of training, not punishing, juvenile delinquents. Our own gaols were not even then in the demoralising condition of those in India. But those of us who engaged in the movement clearly proved that the very best possible gaols

on a strict separate system could not, by the very nature of the case, reform or suitably educate young children. We proved also that, in a pecuniary point of view, it was less expensive to the State so to train children that they may lead a useful and honest life, than to give them such gaol discipline as will inevitably lead to a life of crime. If it is so injurious to send young boys and girls to gaol, where there is every effort made to prevent contamination and to give good instruction, what must be the effect in India, where they are mixed with adult criminals and have no instruction. Occasional attempts have been made to place the juveniles in some degree of separation from the adults, but nothing can be done under existing circumstances effectually to remedy the evil. So great is the certainty of every young person being made worse by being sent to gaol, that the substitution of whipping, for juveniles, is appointed by a special Act. It is well known that this does not produce even a deterrent effect;—the boys return again and again, more and more hardened. There are in the large cities of that great country numbers of boys spending their time in idleness and preparing to lead careless lives. There are multitudes wandering over the country learning dishonesty and other vices from their elders.

We are not without examples which prove the practicability of reclaiming these young delinquents, and enabling them to lead honest lives. The only direct effort to carry on such a work in India is at Bombay, where in 1850 an Industrial School was started by some benevolent persons to give employment to destitute boys. The success of this was such that the family of David Sassoon generously endowed it, and it bears his name. The Sassoon Reformatory has received the confidence of the magistrates and of the public, and it still continues a very useful work, though deficient in many of the improvements which experience has now introduced. The detention of the inmates is secured by apprenticing them to the institution to learn trades. A clause was introduced into the Criminal Procedure Act, 1861, intended to enable such institutions to be made substitutes for gaols; but as it limited the time of detention to the prison sentence, the managers did not consider that it would be advisable to adopt its provisions. It remains the only Reformatory in India for Criminal Boys.

A Reformatory corresponding to those in England cannot be established in India without a suitable Act and Government support, as in our country. Even more is needed in India. Voluntary sympathy and co-operation are as needful there as here—and there can be no doubt that these will be always

forthcoming when an opening is given for their increase. In every part of India will be found official gentlemen who are acquainted with the Reformatory system in England, and who will assist with their advice and directions. But the establishment and management of the institution could not safely be left to voluntary effort in India, on account of the constant changes which are taking place. Dependence on this would result in failure as soon as the moving spirit is withdrawn. This was unfortunately the case at Ratnagiri when the official gentleman who commenced the work was transferred elsewhere. The native gentlemen who took part in the work did not understand it, and have petitioned Government to take the whole into their own hands.

The many observations of the conditions and wants of the people which had come before her, had led her to the following conclusions :—

I. In all Education of the Masses in India, Industrial Work should form an essential part. Connected with all vernacular schools for the lowest castes there should be workshops adapted to the condition and wants of the locality. In these boys should receive a good physical development by useful work and skilled labour, with an introduction to the simple laws of physical science ;—small payments should be made to the scholars for work actually done, dependent however on regular attendance at school.

II. In all factories or workshops where young persons, whether boys or girls, are engaged in work, it should be rendered obligatory on the managers to give three hours, or half-time, schooling to each child up to a fixed age, or until he has reached a prescribed standard. The time of labour should also be limited by Act. An Act will be needed for this similar to our Factory Act. Factories are rapidly spreading, and will do so as the industry of the country develops. It is most important that steps should be taken soon to establish the necessity of education in connection with work. It is said that there are thousands of children in Bombay alone engaged in factory work. The Government must decide whether these are to grow up to perpetuate ignorance and its constant attendant superstition in India. If these two provisions are carried out universally, there will be far less need of provision for youthful delinquents and vagrant children than at present. It would be perhaps better not to establish two sets of schools, as we have in England—both Reformatories with imprisonment, and Certified Industrials without any—but to begin with Government Industrial Schools only, leaving others to be

provided for as necessity arises. I would therefore propose thirdly:—

III. That no young person under fourteen should henceforth be sent to prison, but that all who commit acts for which they are now legally punished, and all wandering without proper guardianship, should be sent to a Government Industrial School, under the general provisions of the English Industrial Schools' Act. These Industrial Schools to be established by Government, and under the inspection of the Educational Department. These schools should not be too large for individual care to be taken of the inmates; the licensing and supervision after discharge to be carried out as in England.

Miss Carpenter concluded by observing that there can be no doubt that all these three proposals, properly carried out, would receive warm sympathy and co-operation from enlightened natives.

The Rev. JAMES BEGG, D.D., of Edinburgh, read a paper 'On Criminals Self-Sustaining in New Zealand.' He said that, if our present modes of punishment should be continued, incarceration should always be coupled not only with hard, but if possible remunerative labour. In some respects our colonists have a great advantage over us in dealing with such questions. They are hampered with few conventionalities and vested interests in dealing with the wrongs of society, and they are, therefore, more free to act and more apt to adopt methods which commend themselves to the dictates of common sense. It is more than twenty years since we declared that all criminals, as a general rule, might and should be self-sustaining; and in Dunedin, the capital of Otago, New Zealand, we lately saw this system in full and successful operation. In the Report of the gaol of Dunedin for April 1843, which was only a few months before we visited the colony, there is the following passage:—'It will be seen that the appropriation for the year just closed was 6,563*l.* 7*s.* 6*d.*, and that the sum of 5,861*l.* 12*s.* 10¾*d.* had been expended, being 701*l.* 14*s.* 7¼*d.* under the estimate; while the earnings of the establishment, amounting to 6,491*l.* 18*s.*, show that not only has the service been carried out without any charge to the public purse, but that the province has actually benefited by the department to the extent of 630*l.* 5*s.* 1¼*d.* The labour in which the criminals are employed is in reclaiming land, making roads, and improving the Botanical Gardens—all works in which the people as a whole are interested. He had seen a good deal of this

work, and in particular had witnessed a group of persons busy in cutting down a hill for the purpose of reclaiming land in connection with the harbour. Two soldiers were quietly parading, one on each side, with loaded guns, at a convenient distance, and this was found a sufficient hint that any attempt to run away would be found dangerous. It seems that such an attempt was once made, and the result was that one of the runaways was shot. Since that time there has been no trouble. The men seemed strong and active, and were made sufficiently comfortable. Many advantages result from this system. Society is protected against a great and useless expense. The divine law is enforced, 'If any man will not work, neither shall he eat.' The criminals are greatly benefited. Many men become criminals from the sheer love of idleness. This is effectually checked by the plan referred to. Whilst the criminals feel the discipline to be a real punishment, they leave the place improved and quite able to earn their bread by their own industry if they are so disposed. Many a man, if he knows that he must work, will rather work for himself than for the community. At all events, by this system society protects itself from the wasteful and unnecessary expense of criminals.

A paper 'On Criminal Offences and the Repression of Crime' was read by Mr. WILLIAM TAYLER, F.S.S., F.S.A. The author said that as a preliminary to his suggestions and a clear elucidation of facts, it was necessary to give the following tables of offences committed for the years 1871-1872:—

Classes.	Males.	Females.	Total.
Known thieves and depredators under 16 years of age . .	2,233	637	2,870
16 years and above . . .	12,651	3,934	16,585
Receivers of stolen goods under 16 years of age . . .	8	—	8
16 years and above . . .	1,429	400	1,829
Suspected persons under 16 years of age . . .	2,332	802	3,134
16 years and above . . .	18,003	4,448	22,451
Total			46,877

In addition to this list of the criminal classes at large, there are in local prisons (exclusive of debtors and naval and military prisoners), 16,805; in the convict prisons, 9,684; and in reformatories, 4,424; being an aggregate of 77,790 persons. The

number of houses of bad character (a fertile source of the increase of crime), the resort of thieves, depredators, and suspected persons known in each police district, appears under the following heads:—

Houses of receivers of stolen goods		1,408
Comprising—Public Houses	1,168	
Beer Shops	658	
Coffee Shops	205	
		2,031
Other houses of known or suspected bad character . .		2,029
Total houses of bad character in the Counties and Boroughs, including the Metropolis and the City of London .		5,468

The classification of offences are returned under the following heads:—

I. Offences against the person, 2,586.

II. Offences against property with violence, 3,940.

III. Offences against property without violence, 35,072.

IV. Malicious offences against property, 441.

V. Forgery, and offences against the currency, 859.

VI. Offences not included in the above, 1,293; and in which are comprised every species of crime attempted or committed, from murder and burglaries to larceny.

To this formidable list of crimes and offences dealt with by courts of criminal jurisdiction would have to be added the summary convictions before magistrates, forming an aggregate of upwards of 400,000; comprising breaches of the peace, drunkenness and drink (being under this head no less than 150,000 persons), common assaults, aggravated assaults on women and children, offences under the Licensed Victuallers' and Beer Acts, Masters' and Servants', and others of a less serious character.

Penal laws can only act within certain limits, and the power of such laws extends mainly to palpable acts susceptible of manifest proofs. In many instances the existing laws are insufficient, or are evaded; there are also, under the milder influence of modern laws, a large class of offences springing up which were heretofore infrequent or unknown; such has been the crime of garotting, and the brutal violence against women and children. The one, it is true, has been partially met by the firm decision of the judges, but the punishment of the other is totally inadequate to the crime; and it should be the duty of the State or the law officers, or a specially properly constituted officer of the Crown, to present to Parliament every session supplementary laws to aid the administration of justice, and to give to legislative enactments, as far as possible,

a repressive effect. Such would seem to be called for in the offence of wife beating, by giving powers to the magistracy to inflict a longer imprisonment, with a discretionary power to direct corporal punishment, and requiring sureties after the termination of imprisonment to keep the peace, and the appropriation of the compulsory earnings of the offender during incarceration for the benefit of the wife and children, who most frequently by the wrong doing of the offender become chargeable to the parish. In cases of drunkenness it would be well to administer a wholesome term of imprisonment after a second or third offence. Greater repressive measures are required for the punishment of receivers of stolen goods—the very pioneers of evil and tempters to crime both of the young, the aged, and the profligate. The powers of punishment should be of the largest description against such criminals, and penal servitude on conviction a certain consequence, with adequate imprisonment to accomplices, which, with full powers of constant supervision by the police, would go far to repress and lessen the evil. Some systematic plan under proper regulations was wanted to enable the discharged prisoner, so far as possible, from relapsing into crime, and to prevent his return to his old haunts of vice and dangerous companions. A larger and more extended effort should be made than at present in this direction, which might be effected by Governmental or county aid.

EDUCATION.

TECHNICAL INSTRUCTION.[1]

In what way and at what stage can Technical Instruction be best introduced into our National system of Education? By BERNHARD SAMUELSON, M.P.

IT will simplify the consideration of the subject, the discussion of which I have been requested to introduce, if we admit frankly that in England at any rate (I am glad to believe that Scotland is more fortunate) we do not possess a system of national education. Such a system as I conceive it should afford to all the children of the nation adequate elementary instruction, and, moreover, should offer to all, so far as their capacities and other circumstances will enable them to take advantage of it, full opportunity for further mental cultivation. There are lying before me the calendars of two German schools for boys of the middle class intended for a mercantile or industrial career, the Friedrich-Werder Gewerbe, or trade school of Berlin, and the Real Schule, under the direction of Dr. Schellen at Cologne. The courses of each of these institutions, following after some preparatory teaching in an elementary school or at home, where reading and writing together with a little arithmetic have been acquired, retain their pupils during nine or ten years; and boys who, according to the reports, were to become mechanical engineers, builders, postmasters, merchants, and chemists, left those schools last July, having attained the ages of seventeen to twenty years. The Real Schule of Cologne, the average number of whose pupils is 580, has 28 masters; the Gewerbe Schule of Berlin, averaging 540, has a staff of 32 masters. In every German town of the least importance there are, in addition to the Gymnasium

[1] See *Transactions*, 1868, p. 430; 1870, p. 323.

or Classical school, one or more technical schools resembling those of Berlin and Cologne; the numerous Universities and Polytechnic Institutions furnish the requisite staff of teachers. The fees are small. I have no information as to those of the schools which I have quoted, but I find from the prospectus of another very celebrated trade school, that of Barmen in Westphalia, that its school fees for the year are from 3*l.* in the lowest to 6*l.* in the highest class, and that boys whose friends do not reside in the town are boarded for 25*l.* The governments, the muncipalities, and private persons vie with each other in placing at the disposal of poor scholars of the elementary schools who have shown superior capacity the means of continuing their studies in these secondary schools.

I need not describe the elementary schools of Germany and Switzerland; it is now well known that in them the children of the poor receive, up to the age of fourteen years, sound elementary instruction, not confined to reading, writing, and arithmetic, but including geography, the outlines of the history of their own and other European countries, a modern language, some elementary teaching in science, and instruction in the religion which their parents acknowledge.

As contrasted with a system of education such as I have referred to, and excluding the great public schools, available only to the rich, we have in England for the middle classes schools like those attached to King's and University Colleges, the City of London School, the Bristol Trades School, and, thanks to the Endowed School Commissioners, a few efficient or at any rate progressive grammar and endowed schools, amongst which I would more particularly name the school at Giggleswick, near Skipton, as one where instruction in science has been included in the general plan of instruction; and a small number of exceptional private schools, in which a praiseworthy attempt is made to adapt the instruction to the requirements of the industrial and commercial classes. These schools, however, rarely retain their pupils beyond the age of fifteen to seventeen years, and when all are reckoned they are utterly inadequate to the wants of the population.

Of elementary school buildings we shall soon have a sufficient number, and it is probable that the duty of the parent to send his child to school will, in some way or other, be in all cases made a legal obligation; but so long as the necessity of rendering our training schools for elementary teachers thoroughly national and efficient is not acknowledged, and so long as the instruction of the children in elementary schools is left in a great measure to the care of other ill-taught

children, called pupil teachers, of from 13 to 17 years of age, we cannot hope that our poor will receive proper elementary instruction.

Until the English approach the German schools in number and value it would be vain to expect that technical instruction will be universally accessible, and we can only hope for its gradual introduction, availing ourselves of existing resources, with such improvements as may be looked for under the stimulus of the increasing interest evinced by some of our great corporations, by the parents themselves, and consequently by the Legislature.

One important step in the right direction has lately been taken: although the political chief is still a species of odd man whose duties include the passing of Ballot Acts, the suppression of the foot and mouth disease, and the negotiation of Washington treaties, the Government departments of literary instruction and of Science and Art have been placed under the control of a single permanent administrative head.

I understand technical instruction to include, besides the teaching of industrial manipulation, which for our present purpose we may include, firstly, drawing, mathematics, the physical sciences, which are the bases of the industrial arts; and secondly, the application of those sciences and of the art of design to industrial purposes, I should place in the first division such subjects as:—

Pure Mathematics.	Chemistry.	Physical Geography.
Geometry.	Physics.	Biology.
Theoretical Mechanics.	Geology.	Astronomy, &c.

and in the second—

Building Construction.	Machine Construction.	Metallurgy.
Naval Architecture.	Chemical and Manufacturing Technology.	Agriculture, &c.
Applied Mechanics.		

Although this list is incomplete, it will be obvious that the field is too wide to be covered within the school period, even when the pupils remain at school to the age of adolescence, bearing in mind always that instruction in technical subjects to the exclusion of other branches of a liberal education would defeat its own object. Much more is this the case with children leaving school between the ages of thirteen and sixteen. The choice of subjects must vary with the age at which school instruction is to terminate, and with the future career of the scholar.

A condition precedent, however, to the possibility of technical instruction is a due provision of science teachers. For these we must look in the main as to Elementary Schools to our Training Colleges assisted by such institutions as the Science School of South Kensington, and as to Secondary Schools, to the Universities, and to institutions like King's College, University College, and Owen's College. The training colleges should add a third year to their curriculum; instruction in mathematics and in some of the other subjects which I have included in the first division should be part of the obligatory course; and no elementary school containing, for example, 100 children and upwards, should, after a certain date, receive the Parliamentary grant on results, unless it had a teacher who had passed satisfactorily in geometry, in physical geography, and in physics or in biology. A man thus qualified, having become familiar with the method of science, could, if he chose, afterwards acquire other theoretical subjects, as well as those of application, included in the second division—for instance machine construction, chemical technology, or agriculture—availing himself for that purpose, as to the first class of subjects, of the annual courses for elementary teachers at South Kensington, or of any other means of instruction which may be within his reach. But if he stopped short at the limited but exact instruction in theoretical science which I suppose him to have obtained in the training college, he would be infinitely better qualified as a teacher than if during that course he had taken up a greater range of subjects superficially. Whether he be competent to teach many subjects or not, the children of the elementary schools whom he is to instruct have not time to acquire more than the rudiments of one or two theoretical sciences. At the same time an elementary teacher, who is qualified to give instruction in the applied sciences, will find employment in adult classes, such as those in connection with the Science and Art Department.

Assuming, then, that every elementary school for 100 pupils and upwards, which would include the principal village schools, had a master or assistant qualified in science, the course of such a school should include for all the children linear drawing and lessons on common objects which would be illustrated by locally accessible specimens; the ordinary reading book should also describe in familiar language the phenomena of nature. Those who are acquainted with the admirable text-books on Elementary Science of Professor Balfour Stewart, Dr. Roscoe, and others, cannot doubt that the task of compiling such a reading book will be undertaken by competent hands as soon as the

want of it becomes felt. Indeed I am not sure that it does not already exist amongst the publications of the Irish National Board. The older children, those between the ages of ten and thirteen, should receive instruction in physical geography, in the elements of trigonometry, and, from the age of eleven or twelve, in the rudiments of biology or of physics, perhaps, in some exceptional cases, of both. More cannot be done in the elementary school; a few should be drafted into the secondary school; but the greater number would at the age of thirteen become full time workers in the field, at the bench, or in the factory, possessing, however, as is now but rarely the case, the elementary instruction required for taking advantage in their leisure hours of the science classes which are to be found in almost every district in the United Kingdom. How much may be done there is evident from the success of the Andersonian University in your city, with its 1,400 students, to whose founder belongs the honour of having been, more than a century ago, the originator of scientific instruction to the working classes. Children thus taught from the commencement by such masters, when they afterwards receive instruction in science, would not be subjected to, or would revolt against, cram like that recorded in the report of the Science and Art Department for the present year, in which Professor Ramsay, the examiner in geology, says that 'candidates answer one of last year's questions in place of one of this year's as if they had been specially crammed in last year's examination;' and Professor Carey Foster, acting with Dr. Tyndall as examiner in acoustics, light, and heat, states that a good number of candidates in the advanced stage 'suppose that in order to *damp* the vibrations of a string it is needful to *wet* the string,' and 'that a SHIP is the kind of VESSEL that would usually be employed for containing air.'

Amongst other conspicuous examples of adult instruction in science given to the class whose education has been received in elementary schools I may name the lectures for working men of Owen's College, numbering more than 600 students, under the gratuitous tuition of the professors of that institution, and those of the Miners' Association of Cornwall and Devon, organised some dozen years ago by Mr. Robert Hunt, F.R.S., keeper of mining records, whose teachers seek out the working miner in his village and make him familiar with the laws of the forces and the properties of the matter with which he is brought into contact in his daily work. But time is wanting to allude further to the subject of adult elementary instruction in science, nor will I enter into the question of science teaching in our

great public schools, which has been inquired into by Mr. Norman Locker, F.R.S., the secretary of the Royal Commission on scientific instruction, whose report will doubtless be forthcoming before long.

In Secondary Schools, assuming the existence of competent teachers, and that they retain their scholars from the age of eight or nine, to sixteen or seventeen, I should commence, as in the elementary school, with lessons in drawing and on familiar objects, and in physical geography; and introduce mathematics, beginning with geometry, at the age of eleven or twelve, continuing it until the pupil leaves school; systematic instruction in the elements of natural science might begin at the age of ten to eleven with natural history, including geology, and the six years until the pupil leaves, at the age of sixteen or seventeen, could be made readily to include successively the elements of that science and of physics and chemistry. With the exception perhaps of applied mechanics, it would not in my opinion be possible to include the applied sciences, but the teacher would illustrate his instruction by practical applications. Work in the laboratory is a necessity if a thorough appreciation in kind, however limited in extent, of natural science is to be acquired; but the experience of the Rev. W. Tuckwell, of the College School at Taunton, communicated to the British Association, and of others, shows that a school laboratory need not cost more than 200*l.* to 400*l.*

Only in those cases where school education is continued to the age of eighteen or nineteen years would it be desirable to introduce such subjects as building or machine construction or chemical technology. In all other cases more real progress would be made by devoting all the available time to theoretical science. The scholar who enters into active life as an apprentice at the age of sixteen or seventeen would see in the workshop the application of the principles which he would have learnt at school, and, if diligent, he would find opportunities of further study in adult classes, in factories, and in text-books on special subjects. For instruction in the entire range of theoretical and applied science it would be necessary that the student should continue the course commenced during the school age at the university or at a Polytechnic Institution, such as there is now some hope that the Science School at South Kensington may become.

Although I have excluded instruction in technical manipulation from the subject of this paper, I think it right to add that the students of King's College and of King's College School save much time and drudgery during their pupilage by the practical skill acquired in the workshops attached to the Col-

lege, and that, according to competent observers like Mr. Nussey of Leeds, the artisans of Elberfeldt, Crefeld, and other continental towns derive great advantage from the schools of design and so-called weaving schools.

I should not fulfil my duty if I were to conclude this Paper without acknowledging, though no alarmist in regard to foreign competition, that other nations, less energetic, less rich in accumulated capital and practical experience, and without the advantage of our great mineral resources, are, thanks in a great measure to their superior technical training, making relatively greater advances than ourselves in many branches of industry, and that the conviction of the necessity for such training has not arisen amongst ourselves a day too soon. Happily it has arisen, and in the most desirable quarters. Manchester, by the judicious enlargement of Owen's College, to which its merchants and manufacturers have quite recently contributed a sum approaching £200,000; Yorkshire, by the establishment of the College of Science at Leeds, to which secondary schools of science are to be affiliated; the Company of Clothworkers, by the foundation of scholarships, and the endowment of a chair of textile technology in the Yorkshire College; the University of Durham, and the coal-owners and manufacturers of the North of England, by their joint foundation of the School of Science at Newcastle; Oxford, by its patronage of the college to be established at Bristol; and the Company of Merchant Adventurers, by the aid which it is giving to the trade school of the same city, are not only directly promoting the higher technical instruction amongst the populations in which their work is done, but will furnish competent teachers to the elementary and secondary schools of their own and other localities. I think there is no fear that a work of such national importance once so actively begun will suffer any relapse; but it will be in the power of this Association to promote by discussion and advice its intelligent and economical organisation.

On the Same. By W. Montgomerie Neilson.

In the first place, we must clearly understand what is meant by technical instruction. In so far as required by those engaged in our arts and manufactures, education may be properly divided into four classes: first, primary education; second, practical art education; third, scientific science education; fourth technical education, which is placed last or highest, a

certain knowledge of what is taught in the three preceding classes of education being indispensable before it can be studied.

The national schools will provide for all classes the primary education necessary to prepare every child for becoming an intelligent and useful member of society in any department of industry to which it may be called.

The *practical art* education will be acquired in the workshop or factory by imitation and repetition. We have, unfortunately, many examples of great skill in this department of instruction without any other kind of education whatever; but it will be readily admitted that in all cases primary education ought to precede art instruction.

Scientific education is in this age generally admitted to be necessary for all classes, not only in order to enable those engaged in industrial pursuits to more perfectly practise and promote our interests, but that the whole people may be better qualified to exercise in an intelligent manner the privileges which our civil and religious liberties have conferred upon them; and for this latter object elementary science instruction, I consider, may be successfully and usefully given in our national schools.

The more advanced science education, however, is, in my humble opinion, altogether beyond the sphere of our national schools, and would be sufficiently provided by our universities and other local schools and institutions if they were only partially aided by the Government.

Technical education, which I will shortly define as instruction in the application of science to arts and manufactures, is not science teaching as schoolmen insist upon describing it; neither is it the practical art of the workshopman; but instruction in the application of the knowledge of science possessed by the pupil to the particular art or manufacture in which he is engaged, or of which he has acquired practical experience.

Teachers of technical education require to be men of more than ordinary attainments. They must have a thorough practical knowledge of the art or manufacture in which the technical instruction is to be given, as well as a sufficient knowledge of the science to be applied, otherwise their practical pupils would have no confidence in their teaching. No doubt, if it were possible, the workshop or factory would be the best place in which to give the instruction; but as it is neither possible nor practicable, the workshop must be brought to the lecture room by specimens of material, models, drawings, and diagrams, which are the apparatus required for technical instruction.

Now we may consider, not how can technical instruction be *best* introduced into the national system of education, but how can it in any way be introduced.

We will take a national school in Glasgow for an example, containing many hundreds of boys and girls, receiving the necessary primary education and probably some science teaching. Supposing that it were possible to give to this school technical instruction, the first question for consideration would be, in what department of industry would the instruction be given? The pupils will be engaged in the many industries carried on in Glasgow, as marine engineers, ship-builders, ironfounders, cotton spinners and weavers, woollen manufacturers, dyers, weavers, glass makers, pottery ware makers, architects, builders, house carpenters, cabinet makers, painters and decorators, brewers, distillers, paper makers, gold and silver smiths, chemical workers, and many others. The technical instruction required for a brewer or potter would be useless to a cotton spinner or weaver, or that required by a glass maker or cabinet maker of no use to an engineer or ship-builder. A special teacher and special teaching apparatus would be required for every department of industry, as all classes would have an equal claim upon the national school. It is altogether absurd to imagine that any general or universal system of technical education can be applied to a national school. This kind of education is peculiarly special. It may be said that these schools could provide special teachers, classes, and apparatus. I doubt this. School Boards as at present constituted are, in my humble opinion, not qualified to manage and conduct such education; the managers of technical schools ought to be selected from men experienced in the various industries carried on in the district of country in which they are to be established, and who could give facilities for obtaining the teaching apparatus required. I say nothing of the great cost of such an undertaking in the hands of a School Board, were it possible for them to carry it out. No money could be more profitably spent by the country. But the question would no doubt be raised—is it fair that such a large amount of the public money should be devoted to Glasgow, Manchester, Birmingham, and other great centres of industry, in order to enable the people of these districts to accumulate enormous wealth? No doubt the whole prosperity of our country depends upon the success of our arts and manufactures, and such a view of the question may be called a narrow one; nevertheless, there are many who gain no direct advantage from manufactures, and who may fairly consider that if the Government does so much for elementary

education those who make great fortunes by manufactures and those towns of accumulated wealth ought themselves to provide at least to a great extent the technical education they require. I do not say that I consider the Government should give no aid to technical education—quite the reverse. When our different centres of industry make an effort to provide technical instruction suitable for their particular industries, the Government would, I think, be doing its duty by giving grants in aid, in proportion to the extent of effort made; and as technical instruction cannot be successfully carried out without the necessary apparatus or instruments, to obtain which is one of the greatest difficulties to be encountered, I would suggest that when proper accommodation is provided the contents of the national industrial museums should be put at the disposal of the technical schools or colleges throughout the country.

I cannot refrain from here expressing regret at the large expenditure made by the Government on industrial museums, with so little benefit to the country. The Kensington Museum with its treasures of art is, no doubt, an object of great interest to foreigners and strangers who visit London; but London is not the seat of British industry, and the museum is of little value to the hundreds of thousands of workers in arts and manufactures in England. And so the industrial museum in Edinburgh—the seat of learning, law, and the fine arts, but not a centre of manufacturing industry—is of no service to the mass of workers in Scotland; its very existence is unknown to our thousands of artisans in Glasgow.

I am certain that the committee of practical gentlemen who have for some time been endeavouring to raise by private subscription sufficient money to commence technical education in Glasgow and the West of Scotland would undertake to establish a thorough system of technical education for the whole of Scotland, if they had at their disposal a much less sum than the 270,000*l.* and 8,000*l.* a-year spent in the Edinburgh Museum.

Returning again for a moment to the question before us, it is asked at what age can technical education be best introduced into our national system of education. My own opinion is that technical education should form no part of the national system of education; but as to the age at which technical instruction should be begun, I would say that as soon as the pupil has acquired a primary and scientific education at school and sufficient practical education in the workshop he is prepared to receive technical instruction, and of this the technical master will be the proper judge as to the age of *the pupil.* I

consider technical instruction can be profitably and successfully given either to the apprentice or experienced workman.

The urgent demand for technical instruction in this country is well known and clearly evident to those who have experience in what may be called the complex or intricate manufactures, but there are many in professional and commercial occupations and others who have succeeded to manufacturing enterprises which they themselves could never have established, who do not understand what technical education is, and cannot see the use or necessity of it. No one denies this country has been made what it is by its arts and manufactures, and all give honour to those great men who, by their inventions and enterprises, discovered to their country the way to wealth and prosperity; but it is forgotten that Watt, Arkwright, Stephenson, and those who followed them were devoted technical students.

It is true that our arts and manufactures have flourished hitherto without technical schools, and we have been able to keep our position in advance of all other nations; but it is also true that our distance in advance has been gradually becoming less, and in late years alarmingly so, and if the same progress of our competitors continues we must be overtaken and outstripped, and chiefly because technical education is studiously encouraged by them and undervalued and neglected by us. In the good old times our apprentices spent long years in learning their callings, and had ample time to overcome the difficulties of becoming successful technical students. Then there were not many apprentices, but they were generally industrious students. Now the pressure is high, the wheels turn with impetuous velocity, the number of apprentices and students is legion. A great deal more knowledge is now required in consequence of the great development made in science, arts, and manufactures; but unfortunately there is less time found for study and learning. The headlong speed of the age cannot permit delay; the rush is from boy to man, and from man to master. It is to meet this state of things that technical schools are urgently called for, in order to provide facilities by which hours of study may do what in years gone by took months and even years to accomplish.

Dr. James Bryce, late of Glasgow High School, read a paper on the subject, in which he made special reference to the relation of Glasgow to this question, and also to the facilities which the city presented for carrying out a system of technical instruction adapted to the industries which were carried on in the city and neighbourhood; and he remarked that, looking at

ur present national system as a means and help to technical education, it appeared to him that there were two objects which were not kept sufficiently distinct in the minds of those who had framed the regulations under which the system is worked. These regulations had far too much a merely practical cast; they had no æsthetic side; they had no regard whatever to any culture of the fancy, or the feelings of the taste or the imagination; they marked off a number of hard and fast lines, and a most determined adherence to a money payment by results. But were there not results which might not be measured by any money payment; which refused to march in the direction of certain hard and fast lines along the well-marked boundary prescribed by the cold practical men who were doling out the national money? A teacher who was a man of taste and culture, who had a love and an enthusiasm for his subject, was not to be bound by such rules. Yet such a man was an infinitely better educator than the man who is a mere instructor; he developed the whole being of his pupils; he cultivated their æsthetic nature, appealed to the feelings, the fancy, and the imagination, and implanted tastes and aspirations which are a delight through life. There were two objects in technical education as he understood it—one was to promote originality of design, and another that the person who practised art should understand the principles on which that art depends. A man who was going to be a dyer and bleacher ought to understand chemistry; the engineer, the laws of mechanics and hydrostatics; that foremen and heads of departments should be up to the theory of the subject. Surely none now-a-days would dispute this, and in so far he had no fault to find with the subjects prescribed in the regulations. About the mere instruction in them also he made no question; but he did question the propriety of the order in which they are taken up, and the entire omission of those he thought of the utmost importance. Manufacturers complained of the want of taste and design in our artisans, and they are obliged to go to other countries to procure novel designs and secure the highest effort of taste in new patterns. Our system of instruction ought to be directed to remedy this defect. Science of any kind seemed to be deemed sufficient, and no attempt was made to adapt the instruction to the age of the pupils; and too little attention was paid to the order in which the human faculties were developed—he meant in the schools for the young, and in primary schools for whose pupils mainly technical education was intended. He urged that they ought to follow nature in the development of the faculties; there

were several classes of studies which had such an effect more than others; but it seemed to him that the group of the natural sciences, as distinguished from the physical sciences, possessed advantages which no other could lay claim to in this respect. Only seven years were allowed in which education was to be secured, and these compulsory seven years expired at thirteen; but with those who pursued a voluntary course there were two or three years more to work upon; and these might be partly employed on those subjects which gave an artizan a knowledge of the scientific principles on which his art depended. Having learned these, he must go for the rest of his technical education beyond the school. He considered a museum of natural objects, raw material, and manufactured articles, an essential requisite to every school, and that care should be taken that it be always kept clean and tidy. The teachers could not, of course, be required—could never be required—to impart technical instruction; but the object might be accomplished in two ways, either by the Government paying the salaries of technical professors, schools being affiliated for the purpose, and one professor supplying the wants of several in one district, another those of another; or else by the establishment of a number of technical schools, by voluntary effort, in different districts, whose chairs should be supplied by a few professors circulating among them. Voluntary effort would be unable to do this in the smaller towns, and it could only be in the larger cities that a technical college could exist, supported by the subscriptions of the citizens, or by one grand effort which should raise at once all the funds required for permanent support.

DISCUSSION.

Mr. David Sandeman (Glasgow) was of opinion that the time for speaking upon this subject had passed, and that immediate action ought to be taken. As Convener of the Executive Committee of the Technical College at Glasgow, he had been desired to prepare a scheme for the establishment of a Weaving School. He intended shortly to submit his plan to the Committee: it would resemble the schemes already existing in Germany. It was necessary to instruct the young both theoretically and by means of models. He would have so many power and hand looms, and teach them how to manipulate various fabrics; he desired to see such a system established in this country as would enable all who were engaged in these institutions to understand how to warp and weave, and how to blend and arrange colours. A school for this purpose was about to be opened in Leeds. He wished a similar school to be established in Glasgow—not in slavish imitation of

e German schools, but adapted to the superior intelligence of the ople of the country. The Germans made up by perseverance for ant of that intelligence which was possessed by the people of Scotland a superior degree. In a school such as he proposed youths of all ges could receive technical education. Gentlemen who had been long ngaged in business had come to be pupils at the school which already xisted in Glasgow, and their object now was to give labourers and anagers a more complete knowledge of their business. There were any useful scientific institutions in Glasgow, but they needed to apply cience practically to the arts and manufactures.

The Rev. Dr. Rigg (London) deprecated any reflections upon training colleges, because their course of instruction had been prescribed by the Government, who must bear the responsibility of such faults as could be discovered. The standard of instruction in these colleges had been lowered by the direct action of legislation which at the time it passed was quite as popular as the ideas now enunciated by Mr. Samuelson. Those who held that the principles of the new code were retrogressive had been fully justified by the subsequent verdict of the country. It would be a very good thing if a certain proportion of the students in training colleges were to remain a third year with the special object of being prepared to become teachers in schools of science, and all that he could recommend in regard to scientific instruction, which laid the basis of technical instruction, was that the teachers, having been thoroughly grounded in the principles of science, should ascertain the scientific aptitudes of the children who came under their charge. Such aptitudes would, in some instances, be developed by the age of twelve or thirteen, and those who manifested a capacity for studies of that nature could be selected for scientific instruction. Exhibitions or aids of that kind must be established to give these children an opportunity of pursuing a scientific education in the higher schools; but nothing more than that could be done in connection with our elementary schools. There was great danger of forming conclusions in regard to England from a very narrow induction of facts drawn from the Continent. It was becoming customary to refer to the large and highly organised schools in great continental cities, and to apply inferences from them to village schools in England; but such a practice must lead to confusion. Our village schools would bear a favourable comparison with village schools in Germany. When our social system became so changed as to enable us to retain children at school from thirteen to seventeen years of age, as was done in Germany, perhaps more might be accomplished. At the same time it should be borne in mind that the remuneration given in Germany differed from the sums expected in this country. A German schoolmaster receiving 40*l.* a year would be considered to be handsomely paid, and fees for the scholar of 6*l.* or 8*l.*, or charges of 25*l.* a year for board and lodging, were by no means low figures when the pay given to Government officers was taken into account. No system which did not grow up and prove itself suitable to the conditions of the country could ever be national in England, and we required perfect liberty for individual enterprise and free competition, so that genius and ability might receive a proper Government

test and mark. It was important that technical schools should be in the nature of the civic and county organisations which had been mentioned, facilities being given for combination. Mr. Samuelson had condemned the pupil teacher system. It had, however, been originally borrowed from Holland and Switzerland; and in the view of Mr. Arnold 'pupil teachers were the sinews of English primary instruction.' No doubt the age should be raised from thirteen to fourteen as soon as possible, but the idea of training teachers who had never been apprenticed ought not to be encouraged. If their aptitude were discovered and they were trained to the work, they were likely to make better teachers than could be secured by any other plan.

Mr. THOMAS HARE (London) explained briefly a proposal he had made on a former occasion, with special reference to country schools, for preparing children of from seven to eight years of age to receive technical education by sending them out of doors at certain periods, and encouraging them to make use of their eyes in aid of their ears. His notion was that they should be taken to measure the fields in the neighbourhood of their village, in order that they might afterwards prepare a map of the district. They should be taught to give a description of each field, its size, the mode of its cultivation, and the reason why its soil was adapted to the production of particular crops. Calculations might also be made in school as to the value of the produce, and what increase of value it would acquire near a city or within reach of railways or other means of communication. There were in various parts of the country establishments dedicated to public purposes, and children should be taught the history of these institutions and the causes of their appropriation to special uses. It would be well to explain to them also the meaning of rent and matters of that kind; and he believed that one day per week devoted to such subjects would be more instructive than a week given up to any other study. The way would thus be prepared for higher education.

Mr. J. C. WAKEFIELD (Glasgow), as an employer of 800 hands, regarded this subject as being of the most vital importance to a city like Glasgow, and was astonished that Scotchmen did not take more interest in it. What was the position with regard to skilled labour in that country? The foremen, as a rule, were raised from the ranks; but there had never been a school to educate them for their work, and he was anxious to have a practical school where young men who had gone through an elementary course of education could see models and receive such technical instruction as would enable them by application and industry to undertake the management of large manufacturing works. Heavily handicapped as they were, he would not admit that in manufactures they were behind those of the Continent, but their difficulty was to secure skilled hands. These could not be supplied by Government schools, and could only be obtained with the aid of gentlemen who felt a real and deep interest in the progress and success of our manufactures. If to-morrow his manager or sub-manager left him, he believed he could not find one man out of the 800 in his employ who could supply the vacancy. Hundreds of employers in Glasgow were in a similar situation. The other day a great ship-builder

in that city said to him, 'I have a vacancy at this moment for three men, and I can give them 300*l.* or 400*l.* a year each, but I cannot find one in all Glasgow.' The consequence was that he had to bring in foreigners, and place three Germans in positions which ought properly to have been held by Scotchmen. He hoped that new life would be given to the movement for establishing a technical college.

Mr. Cooke Taylor (Preston) was in favour of elementary scientific teaching, and believed no education which did not recognise it as important could be sound. But he was opposed to any idea that technical teaching was education in the ordinary sense. It was not the duty of the State to educate persons for their callings in life, but simply to fit them to be worthy citizens. If youths received a sound training at school they would ultimately direct their energies through the channels best for them, but for the State to attempt to lead them into those channels would be a gross error. It had been observed by Mr. J. S. Mill that the workmen of this country were singularly deficient in ability to turn their labour from one channel to another. How was technical teaching to be of value to them in this respect? Foreign workmen were able to turn readily from one kind of labour to another because their faculties had been cultivated by a sound elementary education. This was the great need here, and it could only be met first by sound elementary teaching, and second by opening museums and schools of art which men could visit in the day, or on Sundays if necessary. The desired result must be achieved by inducing workmen to visit such institutions, but it could never be done by forcing technical education upon an unwilling population.

Mr. Robert Allan (Glasgow) deemed that it was the business of the community to make good foremen or craftsmen such as Mr. Wakefield and other employers wanted, but was in favour of giving a good primary education, and leaving men to instruct themselves in particular branches of knowledge.

Mr. Mayer, as a practical teacher of twenty years' experience, agreed with Mr. Samuelson that children of twelve years of age could take in not merely results of simple observation, but were in many instances capable of great generalisation, and could be brought to trace cause and effect. If School Boards were to do anything to promote technical education, it must be by means of training colleges, or special technical or scientific teachers. These could go into the various schools, or children selected for the purpose and pupil teachers must be brought to some common centre to receive this special instruction, attention being given to branches of science bearing upon the welfare of the being in the first place, and, in the second place, upon the development of the resources of the country. In his school, it had already been mentioned, he taught physiology, which had an immediate bearing upon the public health. They put boys and girls into the same class, and gave *vivâ voce* lessons, illustrated by models. The assertion that the school had been a non-success was a perversion of the truth. In regard to public museums it was interesting to remember that in 1852 or 1853 Mr. Cardwell, who was then President of the Board of Trade, visited Glasgow to see if the civic authorities or employers of labour

would accept as the nucleus of a local industrial museum some of the objects and specimens collected from all parts of the world in the Great Exhibition of 1851. That offer was treated with indifference, but he believed the manufacturers of Glasgow would now gladly avail themselves of an offer of a similar nature, if it were to be repeated by the Government.

Mr. JAMES McCLELLAND (London) spoke of the results accomplished by the system of instruction adopted in the school started by Mr. Cunliffe and himself and conducted by Mr. Mayer, and pointed out the impossibility of giving scientific instruction to children at an early age, unless the teachers were themselves sufficiently educated, stating that, as a rule, teachers throughout the country at present were not able to impart scientific instruction. In fact, young men from the Free Normal School and the Church of Scotland School had been obliged to come, at their own cost, to Mr. Mayer for that scientific instruction which they were unable to obtain at those large institutions. At Anderson's University, of which he was a trustee, a gentleman had endowed with 100*l.* a year each three lectureships; one for physiology, another for chemistry, and the third for experimental philosophy. The classes were attended by nearly a thousand boys and girls. He conceived that even at the age of nine or ten a boy could imbibe knowledge as to his own frame, the air he breathed, and the world in which he lived.

The Rev. Dr. BRYCE (Glasgow) remarked that Mr. Samuelson, in saying that natural science could not be advantageously taught under the age of ten, had fallen into some confusion as to two departments of science. Under the name of natural science were comprised two classes; one the science of observation, the different departments of natural history; and the other, physical science, properly so called, natural philosophy and chemistry. These two branches were essentially distinct, and he knew from experience that the principles of natural history could be thoroughly mastered at a much earlier age than ten. He had no confidence in government administration of education. In the course of a life devoted in a great degree to the work of education, he had not known more than half-a-dozen statesmen who cared anything for education for its own sake. Amongst the first of these, however, he must place the late Lord Brougham, who understood the philosophy of education better than the majority of professional educators. High intellectual culture was indispensable to enable a person to profit by technical instruction, and that culture could never be given until we had teachers of a very different class from those at present existing in this country.

Miss ISABELLA TODD (Belfast) complained that girls and women were overlooked in the consideration of technical education. She insisted that both boys and girls ought to have a very broad foundation of liberal education before anything was attempted in the form of technical instruction. Without first training the mind it was impossible to have well-trained fingers.

Mr. F. B. GRIERSON (Dumfries) stated that in the method of the instruction which he had practised for some years he had sought to

cultivate first the faculty of observation by encouraging the study of nature. When this had been done, attention might properly be given to the department of science which concerned the pupil's occupation in life. But it was vain to expect the present class of schoolmasters to train up children in science, because they did not possess the requisite knowledge. Government held out selfish inducements, but he maintained that the highest object of all education was to raise mankind above self.

Mr. B. SAMUELSON, M.P., adverting to remarks made in the course of the discussion, said he considered Government to be in advance of the country in reference to technical instruction. The facilities which the Government offered were not sufficiently known. There was at South Kensington the valuable Loan Collection which was allowed to circulate through the country, and which was both interesting in itself and as a nucleus round which local specimens might be gathered. It had been much appreciated wherever it had been sent, and Glasgow would do well to apply for it. Mr. Neilson had defined very well what ought to be understood by 'technical instruction,' but unfortunately the term had acquired a technical meaning, and not the sense in which he had treated the subject in his paper. He was aware that young children were better able to receive instruction in the classificatory sciences than in natural philosophy. To guard himself against misapprehension he must state that he found no fault with the Principals of Training Colleges, although he was justified in describing the colleges as being deficient. In Switzerland and Germany the system of pupil teachers had been abandoned, and the far more efficient plan of employing assistant teachers substituted. He approved of the suggestion of Dr. Rigg that youths selected to become teachers should be sent to a training college for three or four years. As to village schools, he must mention that some years ago, when at Stuttgart, he had a conversation with the Minister of Public Instruction, who told him that they chose their village schoolmasters from most capable men, because in the village schools the children were the most ignorant, the time for instruction was the shortest, and the assistance given to the master was the most limited. He concurred in the opinion that unless sound scientific instruction preceded technical instruction the latter would be of little service.

Sir MANOCHJEE CURSETJEE (Bombay) agreed with Miss Todd that in education the soil must be carefully prepared to receive the seed of instruction. The great point was to decide upon the proper mode of preparation. Instead of trying to cram the plastic minds of the young with all sorts of 'ologies' it was the duty of instructors to ascertain the capabilities of their pupils, and impart to them practical and useful knowledge. The extreme beauty of the fabrics of India was to be explained by the circumstance that trades were castes, and that the sons of a goldsmith, for instance, must all follow the same occupation; so that, their minds being from an early age turned to one branch of industry, they became extremely proficient. The age at which technical instruction could be commenced must depend in a great degree upon the nationality of the children.

ACADEMICAL ENDOWMENTS.[1]

What is the best mode of extending the benefits of Academical Endowments in England and Scotland respectively? By CHARLES STUART PARKER.

THE general question as to the best use of academical endowments can be raised more broadly by considering what may be done with them where they are ample, as in England, than where they are slender, as in Scotland.

Also, Oxford and Cambridge, being now set free from restrictions in favour of Englishmen, and from exclusive connection with the Church of England, should be regarded as national universities, belonging not to England only, but to the United Kingdom, or to the Empire.

For these reasons it will be convenient to examine their case first, Professor Ramsay having undertaken to deal afterwards more specially with the Universities of Scotland.

The purpose of the present paper is to draw attention to the Report of the Royal Commission appointed, on the advice of Mr. Gladstone, to inquire into the property and income of the Universities of Oxford and Cambridge, and their colleges and halls.

Except a very brief expression of opinion, commending in some respects the efficiency of the management, the Commissioners have confined themselves to stating facts.

And as these facts are now for the first time correctly ascertained, and brought before the country with some view, no doubt, to further action, a favourable opportunity is presented for discussion such as may help to form public opinion on a question ripe for practical consideration.

First, then, what is the total amount of annual revenues in question?

This had been till now unknown. In 1852 a Royal Commission reported that, owing to the unwillingness of the authorities to answer questions, they had 'little authentic information to communicate.' And in 1868 Mr. Pattison, Rector of Lincoln College, Oxford, wrote: 'The information does not exist at present in an accessible form.' But now, 'the universities, the colleges, and all their officers have, with few exceptions, supplied all the information asked for.'

In round numbers, which for convenience will be used throughout, the Royal Commissioners report the total income as being in the year 1871 for Oxford, 414,000*l.*, or, with prospective increase to the year 1890, 538,000*l.*; for Cambridge, 340,000*l.*, or, with prospective increase, 380,000*l.*

[1] See *Transactions*, 1869, pp. 332, 375.

That is to say, in the course of centuries, by the liberality of numerous founders and benefactors, and owing to the great increase in the value of land, the University of Cambridge, with her seventeen colleges, and the University of Oxford, with her nineteen colleges and five halls, have acquired property of which the total proceeds for Cambridge approach and for Oxford surpass the 'thousand pounds a day' popularly supposed to measure the largest private incomes in this country.

Comparing such princely revenues with the modest income of a Scottish university (less than that of a successful ironmaster or merchant), or, indeed, with the resources of any other university in the Old or New World, and remembering that with their pecuniary wealth and noble buildings Oxford and Cambridge inherit ancient fame and invaluable traditions, intellectual, moral, and religious, besides, until lately, a monopoly in England of the power of granting degrees, we may well inquire, in no unfriendly spirit, whether these great universities are rendering equivalent services to the higher education of the country, and to the general commonwealth of letters and of science; and if not, whether a more judicious distribution of their ample funds might not make them more effective.

But before we can speak in detail of these large amounts as endowments applicable to the various purposes of a university, considerable deductions must be made, and some explanations are required.

The Commissioners themselves have not said expressly whether they regard the total sums returned as gross or net income. And the question is complicated by their having treated differently income arising from different sources. In the case of estates held in trust, the cost of repairs, collection of rents, insurance, &c., has been deducted usually, but not always; whereas in the case of estates held as corporate property these items mostly appear as expenditure. Property and income tax have sometimes been deducted, sometimes not. Again, for some colleges, moneys borrowed in the year for which the account was taken are treated as income, while on the other side appears an expenditure for interest on loans and for repayments.

Such anomalies perhaps were unavoidable, owing to the difficulty of obtaining from so many different corporations, each accustomed to its own way of keeping accounts, uniform returns. But it becomes the more necessary, in order to get a fair estimate of the net income, to look carefully into the items of annual expenditure. These have been arranged by the Commissioners under one and twenty heads, most of which

clearly represent payments out of net income. First come direct cash payments to Heads of Colleges, Fellows, Scholars, Exhibitioners, Prizemen, Examiners, Professors, Tutors. Next follow allowances to residents, expenses of management of colleges, repairs, improvements, rates, and taxes on college buildings, all of which may fairly be regarded as corresponding to familiar domestic expenses of ordinary householders. But lastly comes the outlay for management, repairs, improvements, rates, and taxes on landed estates, which is obviously of another character, and may most properly be treated as a deduction from gross income; and the same may be said of some 23,000*l.* a year applied to augment Church benefices in the gift of the universities or colleges. Subtracting these items, the remaining net income is, for Oxford, 358,000*l.*; for Cambridge, 297,000*l.*

This net income, however, is not all endowment. For Oxford 77,000*l.*, and for Cambridge 62,000*l.*, is what the Commissioners call 'internal income,' that is, money levied by the university or by a college from its own members, for room rent, fees, dues of various kinds, and profits, or in some cases total outlay in the buttery and kitchen departments. At the five halls seven-eighths of the income returned is of this nature. No part of this can be regarded as endowment, unless it be the room rent, and dues for use of college buildings. But the value of the buildings has been already included in the return made of 'external income,' and must not be counted twice. It would seem, therefore, that to find the amount of the endowments the whole 'internal income' should be deducted. And so the net endowments may be stated for Oxford at about 280,000*l.*, and for Cambridge at about 235,000*l.*

We may proceed, then, to consider the application of the income. And, first, we can only glance at and pass by the heavy items of miscellaneous expenditure on establishment, servants, college officers, &c. To examine these to any good effect would require more time than is at our disposal.

Excluding, however, these more general items, the seven chief heads of special expenditure, in order of their magnitude, are as follows:—

	Oxford.	Cambridge.
Fellows	£102,000	£103,000
Scholars, Exhibitioners, Prizes and Examiners	44,000	33,000
Heads	33,000	20,000
Professors and Tutors	24,000	12,000
Chapels, &c.	9,000	6,000
Libraries	6,000	4,000
Scientific Institutions	2,000	2,000

This apportionment is hardly such as the general public would expect, and a satirical person might even suggest as an improvement to reverse the order, giving to 'Scientific Institutions' 100,000*l.*, and to 'Fellows' 2,000*l.*

But, seriously, let us try to understand better the meaning and actual working of the present system.

Taking the number of residents in the university roughly at about 300 graduates and about 1,800 undergraduates, we find that most of the former and two in five of the latter derive substantial aid from endowments. At Oxford 24 heads of colleges and halls receive, on an average, each in money about 1,400*l.*, or, including houses and other advantages, say 1,600*l.*; 40 professors, on an average, under 600*l.*, or, excluding the canonries of Christ Church, under 500*l.*; 360 fellows, each towards 300*l.*; about 480 scholars, on an average, 70*l.*; and some 250 exhibitioners are 'rich on 40*l.* a year.' The figures for Cambridge are not very different, except that the colleges have done much less than at Oxford to endow professors, who have, in all, only 9,000*l.* at Cambridge, as against 16,000*l.* at Oxford.

The professors may be taken as representing special and profound knowledge of the subjects that they teach. In general they are underpaid, and it is evident that if the chairs were less poorly endowed the services of more eminent persons might sometimes be obtained. The patronage also of many chairs might be better vested. But with whatever drawbacks, speaking broadly, the professors are the class on whom the universities chiefly depend for reputation in science and learning.

The heads of colleges are men chosen in riper years by the fellows, usually from among themselves. Hitherto they have been selected for business capacity, or for personal popularity, as often as for learning. But experience shows, and it may in future be expected, that fellows elected by open competition will generally place at their head the most eminent of their number; and from this point of view there is some foundation for the claim put forward by Mr. Pattison, himself the learned head of a college, that the income of the heads should be regarded in part as a special, and not an excessive, endowment of learning. There are active duties also belonging to the head of a college, which if well discharged go far to justify his present income.

Leaving the heads then as they are, we may go on to inquire what are these fellows, to maintain whom the two great English universities, through their colleges, spend each above

100,000*l.* a year? We have no such class at our Scottish universities. They have none such at the German universities. What do these 600 or 700 gentlemen do to earn the lion's share of the endowments?

According to the present practice, the new fellows are elected by the existing fellows of a college, after open competitive examination, in Oxford conducted always by the college, with the aid of assessors, if necessary, in special subjects. In Cambridge the smaller colleges elect upon the results of the university examinations. At Oxford a candidate is elected by any other college as freely as by his own; at Cambridge he must be already a member of the college electing. With this exception as regards Cambridge, the fellows are supposed to be, and speaking broadly they are, the ablest and most distinguished students, selected with great impartiality soon after taking their bachelor's degree, in general before the age of 25. Once elected, for the most part they have no special duties, but are bound in conscience to the best of their ability and judgment to promote the interests of their college and of their university as a place of religion, learning, and education. Most fellowships are tenable for life, being vacated only on marriage, or on obtaining a fixed income from other sources of 500*l.* or 600*l.* a year. A clerical fellow usually remains in college till, after some years of service as tutor, he succeeds to a college living. Some lay fellows also remain for a time, taking part in the teaching, or pursuing further their own studies. But as there is no provision corresponding to a college living on which a layman can retire, residence with them, until of late, has been exceptional. As a general rule they go to their professions. The average actual length of tenure of a fellowship is about ten years, so that the average number of vacancies in a year is more than 30, and the income, as has been stated, is towards 300*l.*

These 'Prize Fellowships,' as they have been called, are too plainly of the nature of sinecures not to have incurred criticism from the general public. They have been attacked also by university reformers as a waste of university resources.

The general public, taking the utilitarian view, have demanded that the fellows, in return for their emoluments, should at least be bound to do some special service, and having but vague conceptions of any other special service to be rendered, they have in general held that fellows, if not abolished, should be employed in teaching undergraduates.

Some university reformers, on the other hand, of whom

Mr. Pattison, in his *Suggestions on Academical Organisation*, may be taken as the spokesman, have declared their opinion that 'a vast diminution of the number of prize fellowships' would interfere but little with the inducements to university studies, and therefore that almost the whole of these funds may with advantage be diverted in another direction. They have definitely proposed that instead of thirty there should be but two or three prize fellowships annually, to be competed for not by Bachelors but by Masters of Arts, and that the whole residue of these endowments should be applied to maintaining 'a central body of learned men devoting their lives to the cultivation of science and the direction of academical education.'

Mr. Pattison has not stated what salary, in his opinion, each such learned person should receive. But he has indicated, as corresponding to the gains of other professions, incomes ranging from 1,000*l.* to 1,800*l.* a year; admitting, however, that position, distinction, the pleasantness of pursuing liberal knowledge for its own sake, and the command of time for literary work, as compared with the slavery, say, of a Commissioner of Bankruptcy, or of the managing director of a bank, ought to count as an equivalent for some few hundred pounds a year.

According to this plan, three hundred fellows at 300*l.* a year would give place to some fifty or more additional professors or learned men, drawing double or treble the present salary of a professor, with a considerable number of university lecturers looking for the succession to such lucrative appointments. Meanwhile, tutors, perhaps the hardest workers, would continue to be paid as now by fees, with some small supplement from the endowments.

The mode of appointment to these chairs Mr. Pattison feels to be a matter of great difficulty and of vital importance, a question, he says, 'stantis aut cadentis Academiæ.' He decides to vest the patronage in a board of five curators, from whose number he strangely and invidiously excludes all peers, sons of peers, members of the House of Commons, and bishops.

Whatever may be the weak points of the present system, Mr. Pattison's proposal, it will be seen, runs too violently to the opposite extreme. It is doubtless desirable to increase the number of professors, to improve their income, and to take the best security that can be had for the election of the ablest and most learned. There is great force in the arguments urged in behalf of making the universities at any cost centres of profound learning and science, and trusting much to the ordinary

working of demand and supply to bring students to sit at the feet of eminent professors. Lord Bacon long since wisely censured 'the smallness and meanness of the salary or reward which in most places is assigned to public lectures,' and pointed out how, 'if the fathers in sciences be of the weakest sort, or be ill-maintained,' the meagre proportions of the teacher will repeat themselves in the pupils—

'Et patrum invalidi referent jejunia nati.'

So far as a university has control of revenues, its duty and its wisdom is to provide for liberal remuneration of its ablest teachers, and not of oral teachers only, but of those who promote science by original research, or literature and learning by composing books.

But it is possible to move in this direction too fast, and too far. A practical measure of the present requirements of Oxford, at all events, may be taken from the replies sent in by the several Boards of Studies and by the professors themselves to inquiries addressed to them by the Vice-Chancellor last year.

It is curious to note the contrast between the demands of the older and the more newly established studies.

Dr. Pusey and four other Theological professors agree that no more professors are wanted in that department, and at most two or three assistant lecturers would suffice.

The Classical professors and Boards of Studies suggest the addition of two professors and four readers in philology, one professor and one reader in ancient history, and two readers in philosophy.

The Mathematical Board desire an increase of at least four professors, two in pure and two in applied mathematics, besides readers.

The Modern History Board ask for a chair of English history, a chair of literature in connexion with history, an additional chair of ecclesiastical history, and means for dealing with archæology, numismatics, military history, and geography; also a staff of readers. And the Board for the School of Jurisprudence require one additional resident and one non-resident lecturer in Roman, and one in English law.

But the largest demands naturally are those of the studies most recently developed—the School of Natural Science, which grows like a young cuckoo in a sparrow's nest. The board ask that the teaching of physics, at present in the hands of one professor, should be divided among four—one for

acoustics, one for heat, one for optics, and one for electricity and magnetism. They also want a chair of experimental mechanics, and suggest one of civil engineering. The individual professors ask, further, for an addition of two or three in biology, one for the department of rural economy as distinct from botany, and a large increase of the staff for chemistry; each new professor to have, of course, a separate laboratory and a demonstrator. In geology the late eminent Professor Phillips was content to ask for one competent assistant.

The Hebrew, Sanskrit, and Anglo-Saxon Professors want no help. But Professor Max Müller reports that, if it be desired to establish a real school of comparative philology, there would be needed for Teutonic, Celtic, New Latin, Semitic, Persian, Egyptian, and Chinese, coupled, if possible, with Tataric and Mongolic, seven new chairs, besides, in view of our Indian responsibilities, a professor of the New Sanskrit tongues.

Dr. Acland, as Regius Professor of Medicine, indicates a scarcely less formidable demand, if it be seriously intended to make Oxford a seat of practical medical education, enumerating the chairs that already exist in the University of Edinburgh, and the lectures at Guy's Hospital, as compared with the one medical professor at Oxford, himself. He suggests, however, that Oxford should aim rather at developing only the scientific side of medicine, in which case for the present four new lecturers might suffice.

Lastly, Mr. Ruskin, as Professor of the Fine Arts, would be satisfied with two 'readerships,' one in modelling and one in painting.

This somewhat tedious list is given to show that the present requirements of Oxford, as stated by those most conversant with them, would be met by an addition of some five and twenty or thirty professors and as many readers. And the largest salary suggested by any of the boards is, for a professor, 1,000*l.*, for a reader or assistant 400*l.* a year. But also it is pointed out by the Dean of Christ Church and others, that many of these chairs would be worth maintaining only if a man really eminent in the subject were forthcoming, and failing this, the endowment might with more advantage be devoted to some other chair. He therefore proposes that in the interests of learning and science a fund be formed and placed under control of persons carefully selected; that this board have power to assign professorships for life or for a term of years to men who have attained or are attaining eminence in branches of study not otherwise recognised in the univer-

sity; and that such professorships as a rule be terminable with the tenure of the persons for whom they were created.

With such provision for the less necessary chairs, all those that have been asked for need not cost more than about 30,000*l.* a year, an expense which might be met bythe appropriation of less than one-third of the fellowships to the maintenance of professors and readers.

Of the remaining fellowships Mr. Pattison would assign almost the whole, if not to professorships and headships, at least to eminence in the several departments of learning, such as can be attained only in maturer years.

The interests of learning pure and simple may seem to point in this direction. But before approving such a sweeping change we should remember that the question has other bearings.

In the first place, at the universities and elsewhere the general feeling is in favour of allowing a tutor to retain his fellowship, even after marriage, so long as he is rendering active service to his college. Mr. Pattison's idea perhaps transcends all college interests. But if so, it belongs not to the present, nor to the immediate future. For the present there will be college tutors. And though their fellowships bring in less than their fees, yet 'to be paid wholly out of fees, or, if necessary, to have a small stipend in aid of fees,' would be for them a downward step to the position now occupied by private tutors, who also will probably continue to exist. For college tutors the reform really needed is one which at Oxford has made great progress, namely, combination among the colleges to divide their work, so that each tutor may lecture on his special subjects to larger and better assorted classes than a single college can furnish. Of such lecturers, the most distinguished are on their way to become university readers or professors in the departments which they make their own. Meanwhile, some sixty or eighty fellowships must be retained for them and other college tutors.

But, also, something may be said in favour of prize fellowships generally. They reward (too lavishly, no doubt) the devotion of many years at school and four expensive years at college to the courses of study marked out for the highest university honours, not only in the old schools of classical literature and mathematics, but in those of natural science, history, jurisprudence, and theology. To describe either Oxford or Cambridge studies at the present day as 'the elements of the learned languages' is less accurate than becomes a leading university reformer. If there is any better

way to lay the broad foundation of liberal learning, and further to prepare the bases on which future eminence in the several departments of human knowledge may rest, let the universities acknowledge this, and change their course of studies. But if the present course, or courses, for honours are believed to give the best training up to the age of three or four and twenty, beyond which few men can afford to continue their studies without liberal assistance from endowments, let this, too, be acknowledged. To those who at that age show the highest proficiency and fairest promise it is not well to grudge the prize of such an income, not for life but for seven or ten years, that they may enter on professions, or on further studies, free from narrowing cares and from the necessity of seeking early lucrative employment instead of higher attainments. To underrate the influence for good that such university men have in their professions, in public life, through the press, and not least in connecting the universities and colleges with the outer world, may be to take a narrow and one-sided view even of the interests of learning.

It may not seem too much, then, to retain in all at each university about two hundred fellowships accessible, as at present, to younger men by competitive examination, but terminable after seven, or at most ten years, except when held in combination with educational or other special duties. This shorter tenure, and the promotions of college tutors to university appointments, would cause a somewhat more rapid succession, so that on an average, instead of two or three (as proposed by Mr. Pattison), there would be some five-and-twenty vacancies each year. But it might be in the power of all colleges, as it is at present of some, by a majority of two-thirds, to elect to such a fellowship, without examination, a professor or public lecturer insufficiently endowed, or any person eminently qualified to render special service.

There would remain unappropriated of the present number some forty fellowships, or 12,000*l.* a year. For this sum it is easy to find employment. Laboratories and other material requirements, would make large claims upon it. Provision also may be needed, especially in the case of lay tutors and professors, for retiring pensions.

But a scheme more akin to the present application of the money has been propounded, and has been received with considerable favour. This is best set forth in an able pamphlet by the Rev. J. Percival, head-master of Clifton College, entitled 'The Connection of the Universities and the Great Towns.' The old English universities are not situated, as three of our

four Scottish universities are, in great towns. This has led to a divorce between commerce and manufacture on the one hand, and learning and science on the other, greater even than exists on this side of the Tweed. Mr. Percival's proposal is that the wealthier colleges should appropriate certain of their fellowships as stipends for professors, who should be members of the college, but should reside for six months of each year in the great towns, and become the centres there of study and intellectual life. The towns, on the other hand, he proposes should be required to subscribe an equal sum towards the endowment of such chairs, and to provide suitable buildings, while the fees to be paid by students would accrue to the professor's income. On this principle, to supply for a great town a university staff of eight professors—say one of mathematics, one of chemistry, one of physics, one of physiology, one of Latin and Greek, one of history, one of law and political economy, one of moral and metaphysical philosophy—would require the appropriation of only eight fellowships. So that if Oxford and Cambridge undertook the negotiation each with four towns, thirty-two fellowships from each university, or less than one-tenth of the present number, would suffice. It is important to remember that these fellowships would not be less, but probably more, attractive than the rest as prizes. The successful candidates for them would for the most part be of maturer age than twenty-five, often promoted from prize fellowships, and hoping in the end to attain to the chief professorships at Oxford or Cambridge.

In such an arrangement, the advantage would be by no means wholly on the side of the provincial towns. They no doubt would profit by the new stimulus to intellectual pursuits. Their able and aspiring students would receive at their own homes instruction, guidance, and the means of testing their progress by university standards. The staff of professors, together with the leading schoolmasters, clergy, and others directly interested in higher education, would form the nucleus in each town round which might gather a society reproducing the best features of university life, and in every way promoting liberal culture.

But, on the other hand, provided (which should be the first consideration) that the central life remains vigorous at the universities themselves, there can be little doubt that Oxford and Cambridge would gain by thus connecting themselves with the larger centres of population. There must be many young men fitted for the student life who cannot afford to make the first experiment by leaving their homes and places of employ-

ment to settle in university towns. Again, there are many graduates well fitted to hand on the torch or to enlarge the hold of knowledge who at present are shut out from professorial teaching, but who in the proposed provincial chairs might find congenial work and adequate remuneration. Nor could the wisest curators devise a better test of fitness for the chief professorships than that of success in the provincial chairs. Lastly, looking to pecuniary considerations, what the universities are asked to give is a trifle compared with what they may expect to gain. They are asked at most to attach special duties to a few fellowships at present held as sinecures. In return they may expect to gain, from the new respect and gratitude for their services which would grow up among the commercial and manufacturing populations, first, a more secure tenure of their present revenues, and secondly, a fair prospect of increased endowments.

With such promise of mutual advantage in closer relations, it is not surprising that steps have already been taken in the direction of these proposals, and the plan itself, or something like it, is in a fair way to be practically tried.

Meanwhile the enterprise with which the old universities have taken on themselves of late the duty of examining the results of higher education throughout the country must soon have the effect of greatly invigorating and raising the standard of their own intellectual life.

Looked at from this point of view, the 44,000*l.* at Oxford or 33,000*l.* at Cambridge spent on scholars, exhibitioners, and prizemen will not seem excessive. Now that education is beginning to be organised, so that the ablest and most industrious children from the elementary schools may be assisted to prolong their school-life, and then the most successful of their number may again be selected for higher studies, and ultimately for a university course, it is not disproportionate to the great revenues of Oxford and Cambridge that they should offer between them about one thousand stipends of 70*l.* each, and half as many stipends of 40*l.*, to the most promising students throughout the country for the four or five years of their university education. It seems desirable, however, that means should be taken to appropriate some such stipends to the class of students who stand most in need, such as those who distinguish themselves in local examinations, but cannot without help afford a university education, or those who can only afford to live at Oxford or Cambridge unconnected with any college or hall. A few of the ablest of these have been elected to the ordinary open scholarships, but it would be well if some

of the colleges would offer exhibitions to be competed for separately by 'unattached students.' One of the most successful of recent university reforms has been the permission to attend the university without incurring the expenses of a college. Experience has shown that degrees can thus be obtained, though with fewer advantages, at a much lower cost than had been possible, viz. for less than 50*l.* a year. The only exhibitions at Oxford as yet reported as being specially given to unattached students are two of 25*l.* a year offered by the Grocers' Company, and one of 30*l.* a year offered by a non-resident fellow of a college. Many of the colleges, however, have been liberal in permitting them to attend college lectures without charge. The university has received from them in fees and dues more than has been expended by the delegacy who attend to their interests.

The university, unfortunately, as compared with the colleges, is poor—'magnas inter opes inops.' At Oxford the total university income, external and internal, including trust funds, is only 48,000*l.*, at Cambridge only 34,000*l.*, and the total university endowments are, at Oxford 29,000*l.*, at Cambridge 14,000*l.*, with little prospect of increase.

This does not include any profits of the university press, which seem to be omitted from the totals. The activity of the press at Oxford of late has been remarkable and highly beneficial to education and to learning; let us hope that it has been also lucrative. But one advantage of great wealth to a university is, that it ought thereby to be enabled to deal liberally as a publisher with authors, bringing out important works of learning or of science without too much regard to the market that they may command.

For this, and other reasons, it may be matter for regret that some part of the superfluous wealth of the colleges does not belong to the universities. But any proposal to treat the property of so many distinct corporations as a common fund would be legitimately, stoutly, and successfully resisted. The most that is proposed in this direction is, that the colleges should tax themselves, in some fair proportion to their wealth, to form a fund for university purposes. And this could only be done by general consent.

To those who are familiar with the distinction between university and colleges it may seem that certain proposals already discussed—the conversion of fellowships, for instance, into professorships—amount to taking college funds for university uses.

But this is not necessarily so. Already some of the col-

leges, under the influence of the former Report and Executive Commission, have come forward spontaneously and liberally to maintain professorships for the benefit of the whole university —at the same time retaining a special interest in the funds by requiring that the professor should become a member of the college, and that the college should have some honorary share in his election. A further extension of this not only is easier to accomplish, but in itself is preferable to an abandonment of revenues by the colleges to the university. It tends to unite the professorial with the college system; it preserves the *esprit de corps* of the colleges, which may be compared to that of regiments in the army; it evokes a generous rivalry among the wealthier corporations in bestowing such benefits on the general academical community; and lastly, which may perhaps enlist some support, it leads to college expenditure upon laboratories or other apparatus for professors whom they have undertaken to maintain.

It seems hardly possible that such reforms as have been indicated can be carried out on a large scale, and with enough of method and of order, except by the aid of some central body, either constituted by the universities themselves, or, more probably, a new Executive Commission appointed by Parliament. But if the latter should be preferred, it is important not only that full scope should be given for spontaneous action on the part of the universities and colleges, but also that the public generally should recognise the reform as coming less from without than from within. Even the reforms accomplished twenty years ago were originated not so much by Parliament or by public opinion as by the prolonged and persevering efforts of a few leading members of the universities. And now, when these earlier reforms are beginning to bear fruit, when experience has shown the value of the professorial system, when a large number of the fellows of colleges have been elected by open competition, when narrow college prejudices have begun to disappear and voluntary alliances between colleges are springing up, when the universities are displaying in every direction unwonted energy, lengthening their cords and strengthening their stakes, the public should not be misled to think they have to deal with retrograde, obstinate, or lethargic corporations. Rather let them believe that, with such aid from the Legislature as experience may prove to be required, the universities and colleges will take the lead in further reform, and will rise easily and gracefully to the position they ought to occupy before the world. Oxford and Cambridge have not always held their own against the German univer-

sities as seats of learning, though perhaps more may be said for them as places of wholesome education, schools for training able statesmen, learned judges, a liberal and enlightened clergy. But of late the tide has turned; Europe has begun to recognise a change; if they pursue steadily the course on which they have entered, the future will be theirs.

What has been brought forward in these necessarily hurried pages[1] comes to this. Our great national universities have at their command extraordinary resources. Much of their present application is good, but the whole should be examined from a central point of view, and any waste at once arrested. Without revolutionary or communistic change, by avoiding extravagant expenditure in any one direction, it seems possible at once to retain the present headships as the highest rewards of learning; to strengthen the staff of university professors and readers—a point of vital importance—as much as they themselves desire; to supply such material resources as they need; to keep a liberal provision of prize-fellowships; to connect the universities by provincial professorships with the great towns, if the great towns will do their share; to maintain the existing supply of open scholarships and exhibitions; and to appropriate separate exhibitions in connection with the poorer class of unattached students lately admitted to the universities, and with the local examinations which Oxford and Cambridge now superintend throughout the country. At the same time means should not be wanting for improving the college libraries, and especially for the better housing of the great Bodleian Library at Oxford, perhaps the most valuable in the world, which is not even free from danger of a conflagration.

If these items of expenditure seem to run beyond the ample income of the present, further affluence in the course of fifteen years will increase the endowments of Oxford by 124,000*l.*, and of Cambridge by 40,000*l.* a year. The internal income also will increase with growing numbers, and if moderate fees be assigned to some of the professors, their stipends need not make so large a claim on the endowments.

One word in conclusion for the Scottish universities, and specially here for the University of Glasgow. We must feel painfully the contrast between the wealth of which we have been speaking and our poverty. Even the two or three prize fellowships—'reliquiæ Danaum atque immitis Achilli'—which Mr. Pattison and his friends propose to leave to Oxford

[1] The Report of the Royal Commission did not appear till the Association had met.

and Cambridge, in place of thirty-five a year, would be a great boon to one of our Scottish universities. With slender means they have fought on well, and by concentrating the income on a few professorships, and making free demands for fees, have even contrived to rob Oxford and Cambridge of many of their best scholars, to fill chairs at St. Andrew's, Edinburgh, and Glasgow. But if the English universities, out of their abundance, are asked to colonise the larger towns, may not the wealthy towns of Scotland with universities already in or near them be moved to do more for their adequate endowment? It is hardly necessary to exhort them to this duty, for the golden stream has begun to flow, and nowhere more copiously than at Glasgow. But the soil is still thirsty. And whatever the great political economist may have said here to the contrary, we know from experience, as well as from Dr. Chalmers and his pupils—'classis numerosa'—who to his and their satisfaction have slain Adam Smith's argument again and again, that in these higher departments of culture the crop will bear some due proportion to the artificial irrigation.

Professor G. G. Ramsay, of Glasgow, read a paper on the same subject. In his opening remarks he said he believed endowments, in the present state of society, absolutely indispensable for the maintenance of higher education and learning, and went on to mention that he considered the fee system was at the very root of the present unsatisfactory state of learning in Scotland. He maintained that it was the very essence of good teaching that classes should be small, and the fee system made it the interest of every professor that his class should be as large as possible. Again, he argued that system was too uniform, and so long as it remained it would be impossible to diminish that uniformity without interfering with the incomes of the professors. In the present day two views were advanced —the one the practical or educational view, and the other the scientific view. Although, as he pointed out, the public had taken with the former, he would yet insist that, whatever might be done with the practical view, the scientific view should never be left out of sight. He believed learning and teaching to be indispensable to each other. No man would be a great or successful teacher who was not himself a learner. What was needed to enable universities to attain both these ends? 1. They should be able to get and test the young brain power of the country, attract the best of it to themselves, and assist proved merit to go through the university course. 2. They should stimulate exertion during the course by the prospect of

further assistance at its close. 3. They should encourage and enable the most distinguished students to remain at the university after completion of their general course to fit themselves for the higher and more scientific study of their future profession, and thus add at once to the earnest student-life of the place, and create for themselves the prospect of becoming something more than mere practitioners in after life. 4. They should afford a special home and career to the highest of all professions —that of learning and of teaching in every branch of scientific knowledge. Now, he had to ask how far did universities—English and Scotch—with the resources they possessed, attain their objects? In illustration, he showed that Oxford spent 35,000*l.* a year on scholarships and exhibitions, which were open to free competition. How stood Scotland in comparison? Aberdeen had a splendid system of bursaries open to public competition; and, as one result, the schools and schoolmasters who fed Aberdeen stood head and shoulders above their brethren in other parts of Scotland. But how stood Glasgow? Oxford, with 1,500 or 1,700 undergraduates, spent 35,000*l.* per annum in this way; in Glasgow, with 1,250 students, nine-tenths of whom were poor and struggling, there was given in arts bursaries 1,397*l.* annually, but of this sum only 733*l.* was given by examination, and, again, of this sum only 397*l.* was awarded by open competition, while 340*l.* was competed for under restriction of place, birth, &c., for in Glasgow University to this day they had been unable to get rid of the blot of private patronage. 659*l.* per annum of precious university stimulus was begged for and bestowed possibly on merit and poverty, but certainly not in such a way as to apply a stimulus to learning either in schools or universities. Among the offenders in this respect he had to include the Lord Provost, the magistrates, and town council of Glasgow. But even if all the bursaries were open, they had not enough. There must be a sufficient number to make their attainment a regular object of competition among the schools, and to hold out to every well taught, able scholar a tolerably sure chance of obtaining one. Instead of about four or five bursaries open annually to free competition, we ought to have at least twenty or thirty to bestow every year, varying in value from 15*l.* to 20*l.* per annum to 30*l.*, and this result we should attain if we could first throw open our existing funds, and obtain further in one capital sum as much as Oxford spends, viz., 35,000*l.* The wealthy and generous citizens of Glasgow should remember this, and they might be sure that seed thus sown would bear fruit an hundredfold. He subsequently held that the secondary instruction of Scot-

land was, as a whole, in an utterly unsatisfactory condition (he would be justified in using a stronger term) and needed radical reform, and this in spite of the fact that there was no finer intellect to be found anywhere than amongst Scotch masters and Scotch scholars. The teachers were entirely dependent on their scholars, and they taught what paid best; but School Boards were bringing about a reform in this respect, and he made special reference to the Glasgow School Board to improve the High School. On the question of fellowships, he said that a fellowship was the great prize for which an English student waited during his course. At Oxford some thirty or forty were given, and open to competition every year. There were 376 fellowships, and as each was worth between 200*l.* and 300*l.* a year, nearly 100,000*l.* per annum was spent in this way; and in Cambridge the figures were much the same. The fellowship system, in his view, had two radical defects. 1. They were, with some exceptions, bestowed for life, or till the holder should commit the folly of matrimony. The result was to paralyse rather than to stimulate exertion. 2. There was, as a rule, no condition of work attached to them. He would suggest that the fellowships should be bestowed at first for a strictly defined period in all cases. They should be held for a certain time—say three or four years at most—independent of all conditions; that a further term of say three years—seven years in all—should be granted to all who should pursue a definite course of study (at the university or elsewhere), and within a certain time take an examination in a higher degree. 3. That all tutors (whom he should like to see appointed on a university rather than a college tenure) should retain their fellowships as long as they taught in the university, and after a certain number of years of good service be allowed to hold them as pensions for their life. In Scotland we had the system in embryo, but nothing more. We had 1,500*l.* a year in place of 100,000*l.* spent in fellowships, of 80*l.* or 100*l.* a year each, and limited to three or four years' tenure. Nothing was more wanted in Scotland than a body of men, cultured, well educated, and keeping up their connection with the university. But now he came to the apex of the university system—the teaching powers, whether of tutor or professor. Oxford had no less than 153 college tutors or lecturers, and some 39 professors or university lecturers; Cambridge 135 college tutors and 33 professors—all this besides private tutors or 'coaches.' In Glasgow, with 1,250 students, there were in all, counting every form of university teacher and assistant, 27 professors and 11 assistants—38 in all. In Oxford, with

all her army of teachers, the state of matters was most unsatisfactory. The system suffered from two radical defects—waste and parsimony—waste of teaching powers, because each college had its own complete staff of tutors to teach to small classes of half-a-dozen the same subjects over and over again; parsimony, and consequent want of efficiency, because almost all the whole of these teaching posts were under-paid. What was needed was a regular gradation of positions, through which the zealous and able teachers might rise from being fellow and lecturer to being tutor. In some other remarks he pointed out that the total endowments of the whole body of 33 professors and their assistants in Glasgow was estimated by the Commission of 1858 at 13,157*l.* Of this sum emolument provided 4,584*l.*; Parliamentary vote, 2,685*l.*; and fees, 5,885*l.* This last item he thought was under-estimated, and probably not less than 7,000*l.* a year was made from fees. The average income of the professor came to much the same as at Oxford, but it was still pitiful, and prevented the profession competing with others on equal terms.

DISCUSSION.

The Hon. George Brodrick (London) wished to be understood as agreeing in the general conclusions drawn in both papers, believing that the principles laid down in them were not only true, but in harmony with each other. If he differed from Mr. Parker at all, it was chiefly in respect of the somewhat apologetic tone he assumed in introducing the subject to the notice of a Scotch audience. He could not adopt the same tone. He belonged to a university which was famous in Europe eight centuries ago, and to a college which was founded a year before the first House of Commons assembled, and had left its mark on English education long before the Reformation. It numbered amongst its fellows two distinguished Scotchmen, one of whom was Professor Caird. It could not be a matter of indifference to the Scotch people what became of the emoluments of any university or college. There had been a tendency on the part of the public which Mr. Parker's paper and the results of the Commission would be likely to correct. Large as the revenues of the two English universities and their constituent colleges might be, there was an impression abroad that they were even larger. In the gross they amounted to about three-quarters of a million. No doubt this was a large sum, but he had reason to believe that 900,000*l.* was realised in one year by one nobleman who happened to have a large number of ironworks and coal mines on his property. There were three or four noblemen in England whose ordinary annual income exceeded the jointed incomes of both universities and their colleges; and anxious as he was to see the best use made of those revenues, he thought the Universities had a far better account to render to the nation

than the noblemen to whom he had referred. It should be remembered that of this large sum comparatively little was available for redistribution. A considerable part of it was merely nominal, because it represented expenses which no one would wish to interfere with, in the way of maintaining college buildings, endowing professorships, and making subsidies towards the Tuition Fund. In addition to these professors they had a large staff of tutors. The available fund upon which they might operate, as Mr. Parker had shown, did not greatly exceed 200,000*l.*, or, including the headships, about a quarter of a million. It was the incomes of the fellows and the heads alone with which anyone who had considered the subject would recommend that Parliament or any other body should interfere. In dealing with university funds there were one or two principles to be borne in mind, one of these being applicable to this and every political question. It was, that they should be very careful how they destroyed anything which had life. While life might be easily destroyed, it was very difficult to create; and if they found in the universities vigorous educational life, it behoved them to think many times before they took the fire burning on the altar and scattered the embers over the country, under the impression that they would thus utilise the resources of the universities. That, he believed, would be a great mistake. The true policy was to endeavour to make the fire burn more brightly, and not to distribute the resources in order to benefit towns possessing wealth vastly out of proportion to that of the universities, and which, had they been in America, would have supplied themselves with local universities, and endowed them richly long ago. He applied the same principle to the colleges. The influence of the college spirit was as beneficial in a university as was the influence of the regimental system in the army; and he should strongly deprecate any attempt to merge the colleges entirely in the university system. He would suggest a further caution, and in this respect, perhaps, he differed from Professor Ramsay. He could not agree that to foster self-culture producing no educational fruit was the object of university reform. Although he agreed in Professor Ramsay's view of the claims of the higher education, and protested against a purely utilitarian view of education, he maintained that the man who devoted himself to mere self-culture, teaching nothing and producing nothing in the way of books or scientific results, ought not to receive public money for so doing. In treating this subject he looked at education in its largest sense as the one thing which they were bound to promote. As to the various applications of university endowments which had been suggested, he concurred very much with Mr. Parker; but he thought there was more to be said for what had been rather invidiously called 'prize fellowships' than might appear at first sight. They were a necessary supplement to a system of education promoted by merit, and a great aid to those who had to start in professional careers, the early stages of which were very barren. The benefits rendered by such fellowships were very great, but at the same time he represented the opinion of almost all Oxford and Cambridge reformers when he stated that they regarded the interminability of fellowships as indefensible. A considerable proportion of the funds

should continue to be devoted to fellowships, but the condition of their tenure might be altered very much for the better. He would be disposed to devote even more than Mr. Parker recommended for founding additional scholarships, to be given to students who had distinguished themselves in the local examinations. He regarded education as the true democratic principle and the true levelling power; and he should never be satisfied until he saw an educational ladder of merit reaching from the lowest to the highest grades of society. University scholarships would be the most important round in the ladder. In his opinion a larger sum should be devoted to the salaries of professors, but he did not share the ideas of Mr. Pattison and Mr. Percival that any large amount should be spent by the university in founding branch universities. What the university could really supply was not money, but brain power; and he wholly objected to frittering away resources which ought to be concentrated at Oxford upon the great cities of England and Scotland. His own college and others were taxing themselves for the support of the Bodleian Library, and he hoped the example would be followed and extended. In this money-making age a university had quite as high and peculiar a function as it had in the middle ages. Its duty was to guard the interests of the higher learning, and he believed that upon the whole, public opinion being brought to bear, that object would be served best by respecting the integrity and independence of the universities.

Sir George Campbell, D.C.L. (London) had only lately become connected, and in an honorary capacity, with the university to which Mr. Broderick belonged, but he found a strong feeling existing on the subject of education, and was encouraged, as an 'outside barbarian,' to express his views upon the question. Agreeing with Mr. Parker and Mr. Broderick, he would go much further; but he could not accept the principles laid down by Professor Ramsay, who put learning too much before education. The latter was the main point, and learning could only be incidental to it. He had formed a high opinion of that school in which the professor of writing gained three times as much as the classical master. Education ought to be regulated by the law of supply and demand, and those who thought writing paid better than learning were justified in giving the higher remuneration to the writing master. These endowments as at present constituted were not only misused, but in a great degree positively injurious. He could not enter into the question whether properly applied they were good things, although he believed that education was so valuable now in this country that it might probably be left safely to the law of supply and demand; but it would be far better to throw these endowments into the sea than to continue them under the present system, because they obstructed reform and tended to render it impossible. They acted as an immense bribe to continue the old monkish form of education, which he believed to be mere superstition. Without denying the use of all good education as promoting gymnastic exercise of the mind, he longed to see modern forms of education adopted. In this desire he was supported by a great many men who were practically engaged in the work of education. Men eminent in university education had told

him that the endowments being given to one form of education compelled them to follow the old-fashioned plan; and this he considered a great evil. Efforts had been made to reform the schools, and a modern side had been established in most of them. Having a boy to put to school, he made inquiries, and was told by one of the most practical of head masters, 'You may send your boy to the modern side, but it is the inferior department of the school. It is not on a level with the other, partly from prejudice, but still more because of the endowments.' A few years ago, when competitive examinations for army, navy, and public offices were established, attempts were made to give a fair chance to the modern style or reformed education, but it had been found to be impossible to contend against the principles prevailing in the schools and fostered by endowments, and therefore a backward step had been taken, so that the examiners for these services were now more old-fashioned than they were several years since. Unless the endowments were devoted to some other purpose, it would be necessary to alter the letter of the wills of the founders, and apply the funds fairly to those branches of education which modern thought and experience had shown to be most useful.

Mr. William Jack (Glasgow) said ordinary reformers were ready to admit that the fellowship system was far from defensible; and very few even of those who did defend it would hesitate to declare that instead of thirty fellowships twenty would be sufficient, and that instead of 100,000*l.* 70,000*l.* would be ample. Two methods of disposing of the surplus had been suggested: one, the establishment, in the interest of the higher learning, of a set of honorary professorships, with incomes of from 1,000*l.* to 1,800*l.* a year; and another, a distribution of a portion of the money in the larger towns of the country. With the first scheme he had little sympathy. New professorships were established in the universities as fast as they were required. Whenever a new class of students came forward desiring to be taught, a professorship was established ere long for their benefit. He saw little use in appropriating 30,000*l.* to supply 1,000*l.* a year pensions, but perhaps 10,000*l.* might be well applied in instituting new professorships. What were they to do with the remaining 20,000*l.*? Mr. Brodrick said they were to do nothing with it. He said that the demands of the large towns ought not to be listened to, because had they been in America they would have provided for themselves. No doubt the endowments which had been enjoyed by Oxford or Cambridge for eight centuries had done immense service, but he (Mr. Jack) believed that if they had been distributed in centres of population like Manchester, Birmingham, Leeds, and London, they would have done still more for the education of the country. He argued the cause of the large towns upon this basis: a want had revealed itself, and the large towns were trying to do their duty in meeting the demand under great difficulties. It had not been the custom in large towns to found colleges, but they were beginning to do so. In Manchester, for example, a quarter of a million had been spent within the last thirty years in establishing a college without any assistance from the universities. In Birmingham it was likely that a considerable sum would be spent in founding a college; but there

again the universities had done nothing. And in Leeds and Newcastle small sums were being given for the gradual creation of colleges; and the universities proposed to do nothing for those towns. In Brighton and everywhere throughout the country there were demands for a localised university education, and everybody said it was of the utmost importance that our large towns should be more leavened with culture. But the universities proposed to do nothing for them. He could see no better way of utilising those sums of money which the universities confessed they did not know what to do with than to hand them over to stimulate the educational activity of the larger towns of the country.

Mr. C. C. Cotterell (Fettes College, Edinburgh), as a member of Cambridge University, desired to state that reforms were being made, and that there were at present a great number of young men at Cambridge anxious to assist the country generally in culture. While he was as eager an educational reformer as Sir George Campbell, his highest ideal was not handwriting. He was persuaded that both the schools and universities would profit by a closer connection with each other. A mistake was made in losing sight of the modern requirements of education, and in failing to consider the different conditions which any school or university must satisfy in order to be national. The introduction of competitive examinations had made a revolution in education, but distinguished students desirous of competing for appointments, say in the Indian Civil Service, instead of being able to complete their education at the best schools or universities of the land, were compelled to go for further preparation to those men of whom he would only speak with respect as teachers, but whom the schoolmasters contemptuously called 'crammers.' The highest schools at the present time were almost entirely classical, and the greatest educational reformer of modern days as a schoolmaster, the present Bishop of Exeter, had found himself unable to establish a modern side at Rugby. The universities might do much to remedy this defective state of affairs by forming a closer connection with the schools, so that young men might be sent up at once from school to the universities without resorting to the third stage which he had indicated. He wished the universities to have more scholarships for the form of education which was now required, but it would be useless for the universities to found scholarships connected with schools unless they also provided men capable of competing in teaching capacity with the so-called 'crammers.' In support of his opinion he would mention one instance which had occurred in his experience at Fettes College. The case of a boy, who had evidently those very qualities which would make him a good judge or a good civil servant in India, was discussed by the masters, and they all felt that it was not possible for him to pass straight from the school to the examinations, because he could not be kept there a sufficient length of time. A suggestion was made that he should go for a year or two to a Scotch university, but it was agreed unanimously that it would be perfectly impossible for a Scotch university as at present constituted to compete with the 'crammers' in London. He mentioned that such a state of things was a shame and disgrace to the country.

The PRESIDENT observed that in the last report of the results of examinations for the India Civil Service there were seven successful candidates set down last year as receiving education in Scotch universities, seven from English universities, and five from the school at Cheltenham. It did not appear whether these students had also been under the care of a 'crammer' in London.

Professor G. G. RAMSAY said they had in all the cases from Glasgow University, with one exception.

Professor NICOL (Glasgow) wished to make some remarks upon the true aim of the highest university training, which seemed to him to bear upon the question. He did not suppose that Professor Ramsay had intended to argue that anyone ought to be encouraged in shutting himself up in his own study to contemplate abstract ideas. Such a course of life was rarely if ever possible, for men of learning or thought, being placed in connection with academic institutions, must, directly or indirectly, affect those with whom they came in contact. In speaking of the different provinces of a university, Professor Ramsay might have marked more clearly the distinction between instruction and that indefinite but invaluable training of the powers of the mind which seemed to be the more important function of a university. A great deal too much time and money might be spent upon the accumulation of facts and professorships, and the scholarships might be increased unnecessarily. The great business of a university was to qualify students to make use of their knowledge. During his experience at Oxford and Glasgow he had noticed a great distinction between Scotch and English students. Scotch students, as a rule, displayed greater energy, had greater power of accumulating knowledge, were more industrious, and almost more uniformly ambitious, than English scholars. But their great defect, going deeper than external manner, was want of taste, and not understanding how to mass their knowledge; their powers were often wasted in fruitless endeavours. While Scotland had produced an unusual number of distinguished speakers in all the learned professions in the last fifty years, few Scotchmen had made permanent contributions to the literature of any of those professions. This was largely owing to their want of culture and style. This fact gave force to Professor Ramsay's statement with regard to the necessity of maintaining a high standard in the universities, and that could only be done by means of endowments. If proof of this were wanted, it would be found in the speech of Sir George Campbell, whose argument would go to show that, walking being more necessary than either writing or classical learning, the nurse who instructed a child in the elementary actions of life ought to have a higher salary than the Archbishop of Canterbury. In refutation of the notion that the universities had been obstructionists, he need only appeal to history; and as to the disposal of the endowments, he shared the feeling of Mr. Brodrick in regard to the large towns. There was a tendency to underestimate the effect of the high culture which came from the general influence of college life, and he should be sorry to see the centres of such influence destroyed. As a rule the universities did their best to supply brain power to those large towns

which being so wealthy might properly be called upon to make some provision for themselves.

Professor E. CAIRD (Glasgow) was in favour of reducing the number of prize fellowships, and limiting their tenure to not more than seven years. This would leave a large amount of money at disposal for education, which had hitherto been starved; and the funds might be applied either in promoting science, by inducing men to cultivate particular subjects, or in extending education beyond the limits of the university towns. Both these objects were good. Although a great deal could be said against the devotion of teaching power so much to the culture of the ancient languages, fluctuating popular opinion must not be too readily followed. A considerable sum should be spent in increasing the revenues of the teaching profession in the universities, and in increasing the subjects taught. At a university there ought to be some one to teach every really scientific subject. On the other hand, it would not do to go to the extreme of making a university a kind of monastery of learning; for real students would not be hindered by having to teach the subjects which they studied. He concurred with Mr. Parker in thinking that some of the revenues should be spent upon lectureships in the various large cities, in order to encourage learning in those places, and to secure connection with the universities. It was true that those towns were richer than the universities, but feeling as to the necessity of learning, and of learning particular subjects, was very backward in the country, and the universities could not guide popular opinion without incurring some expense. The appointment of students to fellowships with the condition of lecturing in the large towns would increase the popularity of the universities; such appointments would be eagerly sought after, and would be most valuable in stimulating educational feeling throughout the country.

Mr. HENRY WOODROW (Calcutta) alluded with satisfaction to the manner in which certain colleges were opening fellowships for the culture of science, and remarked that as 'crammers' merely enabled pupils to bring out clearly what they had been taught, there would be little use for them if only universities would pay more attention to examinations. He thought it very natural that Sir George Campbell, who had been prevented from introducing beneficial changes into the Calcutta universities, should feel rather sore about the conservatism of our universities.

Mr. JOHN H. SMITH (Halifax) considered it to be sacrilege to distribute the university endowments over the country.

The PRESIDENT (Lord Napier & Ettrick) said the prevailing opinion had been that endowments were necessary and beneficial in the higher seats of learning, for a double purpose: first, to elicit the highest abilities and attainments of students by enabling them to pursue their studies to the greatest results; and, secondly, to secure and retain in the universities the best teaching power. With reference to the particular form which the endowments had taken in the Universities of Oxford and Cambridge, the prevailing sense of the meeting had been that both university and college endowments should be preserved; that college endowments should not be rashly meddled with,

or by violent measures merged in university endowments; but at the same time it would be desirable, so far as possible, to promote the voluntary appropriation of college revenues to the endowment of university professorships. It was thought desirable also by means of the university endowments to link the universities as much as possible with the higher and middle schools of the country, and with the intellectual proficiency of the nation. The general balance of opinion had been that it was desirable in some form to attach the universities to the great centres of industry, manufactures, and commerce, by deputing university professors to lecture upon particular subjects in those industrial centres, bringing them over, however, to the abodes of learning and reflection for a portion of the year. But he had not understood from the various speakers whether they wished these lecturers to be professors of those branches of learning and science which had reference to general culture, or whether the endowments should be applied to the establishment of lectureships having reference to technical questions and the specific purposes of industry in the localities concerned. This was an important point. Although the subject was new to him, he sympathised with the proposal that lecturers should be detatched from the universities for the promotion either of general culture or for the study of particular technical subjects; but he held it to be of the greatest importance that in all cases the industrial centres should be required to meet the universities by some manifestation of positive sympathy and support. There was another point on which he desired information. It had reference to the secondary education described by Professor Ramsay, and was of special interest to Scotchmen. He could scarcely believe that the secondary education, by which, he supposed, was meant that given in borough and grammar schools, could be so inferior to that imparted in England, when he found that more than a proportionate number of Scotchmen succeeded in the highest walks of competitive examination. In 1873, the Scotch universities sent as many successful competitors for the Indian Civil Service as the English universities. The latter sent up twenty-one, and the former twenty-three; and seven of each passed. Having examined the lists in competitive examinations for other branches of the public service, he found that a much larger proportion of Scotchmen succeeded than would be justified by the population of the country; and he could not reconcile those facts with the impression conveyed by Professor Ramsay, that the system of secondary instruction was so very imperfect.

ELEMENTARY INSTRUCTION.[1]

How far can the Children of the Wage-earning Classes be best brought under Elementary Instruction by means of the Factory, Workshops, and other Acts, and by the action of School Boards. By Rev. J. PAGE HOPPS.

THE question is one that any writer thereon would probably like to re-state. For my own part, I should be content with the elimination of the word 'far,' thus leaving the question: How can the children of the wage-earning classes be best brought under elementary instruction by means of the Factory, Workshops, and other Acts, and by the action of School Boards?

In relation to the entire subject of elementary education, I would invariably reply to a question of this kind by simply saying:—Our main hope is the gradual growth, among the wage-earning classes themselves, of a wide-spread or even universal public opinion and public interest in favour of such instruction—an opinion and an interest of such a character as shall make antiquated and unnecessary any and every legislative enactment for 'bringing the children of the wage-earning classes under elementary instruction;' and, notwithstanding all the discouragements that beset our path, we may, I think, look with hope and confidence for such a growth of opinion and interest.

But, while fixing the eye upon this cheering prospect as the end of our labours, and upon this satisfactory solution of our educational problems, it is undoubtedly necessary at the present time to devise or perfect plans for more effectually bringing the children of the wage-earning classes under elementary instruction.

The important experiment—for it has hardly yet got beyond that stage—which has for its ultimate object the transferrence to School Boards of the work which is now mainly in the hands of religious denominations, has already resulted in the gathering together of at least the elements of a system adequate to our needs. Armed with enormous powers, and aided by practically unlimited funds, it would indeed be wonderful if the School Boards of the country could not rise up to the requirements of the situation, and elaborate a scheme which would, at all events to a very large extent, meet the wants of the community.

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[1] See *Transactions*, 1868, p. 391; 1869, p. 299; 1870, p. 289; 1871, p. 405.

It was only to be expected that an experiment so altogether novel and on so large a scale would land the country in difficulties and bring up tough problems; but these have neither been more serious nor more numerous than ought to have been expected, and there is really no reason for doubting whether the country will overcome all these difficulties and come into smooth waters, happily delivered from sectarian shallows and ecclesiastical quicksands, and blest with a system of education deserving in every way the great word *national.*

I proceed to point out a few of the more urgent and practical requirements of such a system, in order, if possible, to throw light upon the question: 'How can the children of the wage-earning classes be best brought under elementary instruction?'

It must have been with some little hesitation that the Legislature made up its mind on the question of *Compulsion*, seeing that its first experiment in that direction was in the form of a kind of Permissive Bill. In legislating for Scotland, however, Parliament had grown bolder; and, in making compulsion compulsory, a fair trial of that important innovation was ensured. The results in the city of Glasgow well deserve the attention, not only of this Society, but of the country; and I may take leave to speak with authority on this point, not only as a member of the Glasgow School Board, but also as a member of the Special Committee, whose duty it is to conduct the business connected with the School Attendance Department, and the putting into force the 'compulsory clause.'

In one district of the city we found 1,425 children who, after due sifting of all who were absent from school, came out as defaulters. The exercise of our compulsory powers has resulted in the sending to school of 1,391, leaving only thirty-four defaulters in a district where, a few months ago, there were 1,425. In other districts, similar startling results have followed.

It is important to remark here that these results have been obtained notwithstanding the adoption of a very thorough and a somewhat formidable and costly scheme for making compulsion and its results a reality and not a sham, as they easily might be.

After dividing the city into districts, and each district into divisions, we took as complete and exhaustive a census as could be procured of the whole juvenile population. Every statement made with regard to attendances at school was checked by a visit to each particular school named, where the

census papers and the school rolls were compared. The undertaking was an enormous one, but the necessity was manifest; for I regret to say that our first census returns were proved to be honeycombed with falsehoods. This work being done, every defaulter found *not* to be at school, though stated to be there, was individually dealt with, in company with the original sinners and confessed defaulters. But, even when we had traced every child to its school and every falsehood to its perpetrator, and even when we had got the defaulter to really enter into the promised land, our difficulties were only beginning. It did not take long to find out that if we had left the work there the whole thing would be like the chain-stitch of a sewing machine when one link gave way. For what was easier than for a defaulter to attend for a week or two for the purpose of quieting us, and then to coolly slip out into the open again? This discovery, soon arrived at, led to the opening of a ledger account with each child, and a system of weekly checking of attendances at every school in the district. In this way every individual case is watched by the garrison of Board officers occupying each district. In each case of irregularity the cause is ascertained by an official visit. If the cause is good, the case is only watched; if bad, the case glides into the Department of Defaulters, and is dealt with accordingly. In this way backsliders may be detected and come up for judgment again and again. I have given this hurried sketch of the Glasgow system mainly as showing how the compulsory clause is being worked in one of our largest cities, and also as giving a value to my previous statement with reference to the enormous success of our efforts.

It is obvious, however, that the very success of compulsion must bring with it difficulties and dangers of a serious character. The dragging of a lake brings strange things to land, and the dragging of the wynds and lanes of a great city brings to land things stranger still. It will suffice to name the difficulties connected with the poor, the ragged, the unclean, and the undisciplined.

I. The descent of the Goths and Vandals upon Europe is the nearest thing in history to the descent of the Arabs upon our public schools. What are we to do with these? We are bound to force them in, and yet we are unprepared for them. The difficulties connected with the establishment of special public schools for the poorer classes are so formidable that few Boards will readily face them; but, on the other hand, we have the formidable difficulties connected with the herding together in one school of the clean and the unclean,

he tamed and the untamed. We know too well the impossibility of seeing at once what ought to be done; but what we ought not to do and cannot do is plain enough. We ought not to put the dirty defaulter, who has been forced into school, next to the decent child whose parents make every effort to keep it sweet and clean; and we cannot teach the head when the stomach is starved and the back is bare. I would face the difficulty by providing water, bread, and clothes for those who really need them. Of course the School Board as such has no power to pay for bread and clothes out of the school funds, but it can pay for baths and water, and, in the absence of further powers, it would not be difficult to find the rest.

Personally, I would decidedly prefer day industrial schools for the neglected; but, failing these, I would have at every school door a wise woman who should have full power over these three things—water, bread, and clothes—and over every child in relation to them. She should decide whether the scholar should wash or not, and how much should be washed; whether it should eat bread or not, whether it should put on, during the school hours, school clothes or not.

The remedy may seem to be a difficult one, but its difficulty is only its novelty. But, in any case, the tremendous problem is there:—What are you going to do with dirt, hunger, and rags? My reply is, at all events, a simple and a practical one:—Wash the dirty, feed the hungry, clothe the naked: then teach them all. My own opinion is that the process would be in itself educational, and would speedily work a cure. The child, dealt with in this way, would rapidly pass into a purer sphere, and, in the large majority of cases, I believe the process would not have to be continued long.

From a private communication respecting the schools under the management of the London School Board I extract the following with reference to this same difficulty of dirt, and I rejoice to see that my dream has been realised so far as the *washer* is concerned. In Belfast, I may mention, the other part of my dream, that relating to school clothes and food, has long been an accomplished fact. The London correspondent says:—'The plan adopted is, for children who require washing to be taken at a particular time under the charge of a pupil-teacher and washed.' With reference to one particular school, it is said:—'At the mid-day interval, they (the dirty children) were sent to a man appointed for the purpose of washing them, which he did in rotation, beginning with those who required the slightest operation, and ending

with those upon whom most labour had to be exerted. A boy thus lost part of his interval in direct proportion to his dirtiness.'

I need give no instances or evidence as to the urgent need of some systematic dealing with this difficulty. I will only add one observation in reply to the objection that systematic attention to cleanliness would take up too much time and divert attention from the proper work of the school. I plead, on the other hand, for the elementary instruction involved in cleanliness itself. Education, like a cold, can be taken through the pores, and the most ardent apostle of education may consistently hold that there is a close affinity between wisdom and water, elementary instruction and the normal grace of a clean skin.

II. The need of drill and discipline will increase just in proportion as the Arab element is secured. Untamed, restless, and, as a rule, thank heaven! full of fun, the thing to do with a new recruit is to tame him, to teach him to obey orders, and to sit still or to keep step to the word of command. Indeed, for all classes of scholars, too much could hardly be said in favour of the spirited discipline of skilful drill.

III. The payment of fees for indigent children is always a duty, but it is simply a necessity where compulsion is in force. In England, happily, the duty of paying the fee resides with the Board whose duty it is to see that the education is given. In Scotland, unfortunately, the duty of paying the fee resides with another body altogether — the Parochial Board. On many grounds this is to be deplored. The natural and wholesome shrinking from pauperism so common amongst the respectable poor disappears little by little when contact with the relieving officer has once commenced. Familiarity here assuredly breeds contempt; but, unfortunately, the contempt bred is contempt, not of pauperism, but of the old wholesome shame. Beginning with a mere request for fees, it will be wonderful if, in time, the applicant does not advance graver claims.

But difficulties of an administrative and legal character have cropped up in relation to this matter. The School Board is in this anomalous position: it is bound to see that education is given to every child, but it can neither pay a fee nor compel the parent or the Parochial Board to pay it. On this point Sheriff Galbraith, in finding that a poor woman had reasonable excuse from poverty for not complying with the requirements of the Act, and that he had no power to compel an unwilling Parochial Board to pay a fee, added this 'note:

'The result of this complaint is not encouraging. The Sheriff-Substitute, under the powers conferred upon him by the Education Act, has found, upon very satisfactory evidence, that the respondent is from poverty unable to educate her children. In terms of that Act, the Parochial Board, it appears, is of opinion that she is, and decline to accord to her the benefit of section 69. The action of the Parochial Board is independent of the School Board and the Sheriff, and not subject to control by one or the other; but there remains the fact that, notwithstanding the so-called compulsory clauses of the Education Act, this woman's children cannot at this stage be looked after by the School Board for the purposes of education. The Parochial Board won't help, and the children must remain uneducated.'

It is true that the difficulty in this particular case was overcome, but the cause of it remains. An amendment of the law, giving to the authority whose duty it is to see that every child is educated the right to pay fees for the poor, is urgently required.

IV. I pass on rapidly to the relationship of School Boards to employers of labour. The half-time system is at best a painful necessity. It would surely be far better if the Legislature flatly forbade any child to be employed who could not produce a certificate indicating a fair pass in the elementary stages. Failing that, it would perhaps be an improvement if half-timers were compelled to attend Board schools only. This would secure attendance and the nearest approach to effective supervision. It would certainly make the duties connected with the educational guardianship of the School Board far more simple and easy in the case of half-timers, a class now so little under their control.

V. The 'make-shift' of a night school, to atone for the day's neglect, has surely no claim to be commended—some day it will perhaps not be even tolerated. The night school may be usefully employed in giving to *adults* the education they missed in youth, or in affording to young men and women opportunities for improving in *special* subjects; but for the young it is a poor substitute for the day school, and it may easily be made an instrument of torture. A young person who has toiled all day in factory or shop, or who has divided the day between factory or shop and school, is surely not in a fit state to give up the evening also to 'grind.' If the necessities or the greed of a parent drive a boy or girl to work before elementary instruction is secured, we only add cruelty to misfortune by insisting upon attendance at a night school,

unless special attractions conspire to make it a source of interest and recreation.

VI. A very few words must suffice with reference to the powers of School Boards in relation to industrial schools, and the desirability of establishing such schools as a part of the educational system of the country, and under the full and direct control of School Boards. An industrial school is, in its fully developed form, a *permanent* refuge or home for children whose chance of being trained to habits of industry is practically *nil;* but we need a half-way house—a day industrial school. Unfortunately, the use of drag-nets in great towns brings us face to face with many such, and every step forward only forces more urgently upon School Boards the serious problem connected with the industrial as well as the elementary education of these. The powers of School Boards in relation to industrial schools are limited to the providing of ordinary certified schools under a Secretary of State, and ratepayers might look with alarm upon the proposal to take any considerable advantage even of such powers as they have. On the other hand, I argue for a large extension of those powers, enabling School Boards to provide industrial schools of a kind suited to the special needs of each locality; and surely if the economist, who grudges the money, will only take into account the cost of pauperism and crime, and the commercial value of industry, thrift, public security, and the training of heads and hands hitherto unreached, he will probably come to the conclusion that industrial schools will pay the ratepayers even as an investment.

VII. I cannot conclude without a reference to one great principle involved in any scheme of education deserving to be called *national*—I refer to the principle recognised by the Legislature in declining to pay for or in any way to recognise subjects that belong to the ecclesiastical or theological sphere. A national system, paid for by the nation, enjoyed by the nation, and managed by the nation must be and can only be *secular.* Sectarian formularies and theological dogmas divide men, but a national system of education must unite them; and what is wanted above all things is unity in working national education.

I will not, however, pursue this subject as a question of principle, but will, in conclusion, refer to two practical points in connection with it.

The first is, that the introduction into public schools of subjects not secular can only interfere with the proper work of the school. In these days no time can be spared and no strength can be afforded for subjects other than those recognised

by the Act, paid for by Government, and acceptable to all. The reports of Her Majesty's Inspectors in Scotland for 1871–72 and 1872–73 furnish abundant evidence, and evidence of a most startling and suggestive kind, on this subject.

A second point is the very serious effect upon the teaching body of introducing into public schools ecclesiastical distinctions on theological subjects. I think it was our President, the Earl of Rosebery, who said some time ago in Edinburgh, 'If the Boards are sensible they will simply say to the teacher, "You are a good teacher of the ordinary branches; you are an honest and upright man, and therefore we shall retain your services in the secular branches, but we shall dispense with them in the religious."' If, however, Boards are not 'sensible,' and decide to impose upon all their teachers the duty of giving theological instruction of a particular kind, one of three things must happen:—either the teacher will be asked no questions, his competence and his willingness to give that theological instruction being taken for granted; or only teachers of a certain type will be chosen; or some who do not believe the particular theology, or who do not think it desirable to introduce it into public schools, will be coerced into imparting it. In any case the effect must be the degradation of teachers, and, consequently, the lowering of the moral tone of the school, and of the general standard of education. That the country will, in the long run, approve of any system which tends that way, and which also involves the destruction of free-trade in teaching, by restricting the choice of teachers to those who believe or who will consent to teach a particular theological system, surely no one can believe. But while I argue for the complete uplifting of our public schools from the hot and stormy arena of ecclesiastical and theological strife, I have no fear that real religion will suffer by that. In the absence of dogma, a good teacher might make a really religious influence felt, and I do not believe that religious people will neglect their duty because the State leaves them to do it.

I refer to these two points in no spirit of opposition to any particular party, but as practical matters needing to be ventilated and discussed. I trust I have referred to them in a right spirit and purely for practical ends. I shall, at all events, be abundantly satisfied if what I have said can throw light on a difficult subject, or if, through my darkness, the light that others have can the better be made to shine.

On the Same. By William Mitchell.

I SHALL not insult the wage-earning classes by taking it for granted that, as a rule, they are indifferent about the education of their children.

I believe that, generally, they are willing and even anxious to send their children to school, and to give them as good an education as their circumstances will afford. It is no uncommon thing to find the most ignorant and unlettered parents earnestly striving to secure for their children the benefits of an education of which they themselves have felt so much the want.

How, then, it will be asked, do you account for the large number of children growing up in the community utterly devoid of even the most elementary instruction?

Experience has led me to see that these children belong to a class for which I cannot find an exactly appropriate name, but which is mainly composed of the careless, the ill-behaved, the afflicted, and the poor. It is the fact of their being neither working nor wages-earning, to the extent, at least, of being independent, that has mainly to do with the neglected condition in which their children are found.

It will readily be understood that they require to be dealt with in the most discriminating manner: the careless and ill-behaved with firmness and even rigour; the afflicted and poor with leniency and consideration. I shall proceed to consider—

First. How they are to be got at.

Second. How to deal with them when got at.

I propose to consider these questions practically; to shew, not how they may be answered, but how they have been answered. In doing this I shall be guided chiefly by the plan adopted by the School Board of Glasgow, and shall give some illustrations of the difficulties encountered. I shall notice certain results which have attended these efforts, and conclude with a short statement of my personal opinion regarding the compulsory clauses of the Education Act.

For the effectual prosecution of such work it is advisable at the outset to originate a special department charged with its entire management — superintended by a committee of the School Board. The first step must be to organise a good staff of men for officers; and the second, a good system of books and bookkeeping.

STAFF.

The principal officer ought to be a man of good parts, well

educated, practically acquainted with human nature, and able wisely to control and superintend the work of his subordinates.

The sub-officers ought all to be men of unblemished character, accurate, forbearing, conciliatory, and able to gain the respect and goodwill of the families with whom they are constantly in contact. It is well when they have their work at heart, and establish among themselves an *esprit de corps* which carries them beyond mere drudgery, and gives them an interest in the success and prosperity of the department.

It is essential that they be equipped in a uniform, which is better when of a quiet, unpretentious character. Rules for their guidance should be supplied. A copy of the Glasgow rules is submitted.

CENSUS.

The next consideration is how to begin operations, and, as nothing can be done efficiently without correct information, it is evident that the first duty of the department is to obtain an accurate educational census. For this purpose the registration districts form an excellent basis.

It is well to begin with those districts first in which there is the greatest educational destitution, combined with some surplus school accommodation.

Having selected a district, the first step is to arrange it in divisions, comprising about 300 or 400 families, where half-a-dozen officers may be set to work, each having a separate division.

Each officer is provided with a book of schedules for the division into which he is sent, containing a printed form corresponding to each family. He enters accurately upon this form the name and address of householder; names and ages of all children under thirteen years of age resident in the house; whether they are at school, or if not at school stating reason given.

A letter of the alphabet and running number is attached to each form, identifying every family, and making future reference in the office books very simple. There are other details taken note of, to which I need not at present refer, but I submit a few copies of the schedules for the benefit of those who desiderate full information.

Each afternoon the officers return to the School Board office, where, in rotation, they read off to a clerk the names of families and children five to thirteen years of age not at school, and these are entered into a book called

THE NON-ATTENDANCE DAY-BOOK.

The name and designation of each family in which there are children five to thirteen years of age *Not at school* occupies a small compartment in this book, where particulars are noted down, and space is left for inquiries and information.

This book lays the foundation for future operations; but, before following this up, I ought to notice that we do not take it for granted that the information received relative to the children said to be at school is always accurate. When the inquiry in each registration district is completed, lists are made up of all the children and the schools which they are represented as attending, and these lists are handed to the various teachers for verification. In this way, I regret to add, a considerable number of children are found non-attenders who, if the parents' statements had been taken for granted, would have been included among the children 'At school.'

Returning to the Non-attendance Day-Book, an abstract of it is made up daily under the eye of the principal officer, for the purpose of separating those who have reasonable excuses for their children Not being at School from those who are defaulters.

The excuses accepted as reasonable are—when children are under six, and considered by their parents too young for School; when they are temporarily ill; when they are taught efficiently at home; or when they have received sufficient elementary education to satisfy the requirements of the Act. A large number of permanently infirm, incurable, and imbecile children have been brought to light by the School Board inquiry. To these I shall afterwards refer.

The defaulters who remain after this sifting process is gone through are carried into the

DEFAULTERS' BOOK,

which forms the basis of all subsequent practical dealing with defaulting parents.

This dealing constitutes the most important and difficult work of the department. It has been found to exercise a very wide and general influence, far beyond the individual cases in which it has been exercised, so that each case has to be considered not only on its own merits, but with reference to its effect generally.

The first and most lenient dealing is

A CALL FROM THE OFFICER,

reminding parents or guardians of their duty to their children, and of the responsibility they incur by neglecting their education. This first step has generally the effect of reducing the number of defaulters by two-thirds; and as soon as the particulars have been definitely ascertained, an official mark is stamped in the defaulters' book opposite the names of those who have thus been brought to reason.

A list is made of the remaining third, or whatever the number may be, and upon these there is served a printed form called

FORM NO. 10,

upon which is written the name of the defaulting parents or guardians, with the names of the children whose education is still being neglected. They are warned against continued neglect, and the 69th section of the Act is quoted, in which they may find their legal responsibility to provide elementary education for their children, and also the provision that if unable from poverty to provide therefor they are to apply to the Parochial Board to pay the fees.

This notice, Form No. 10, has again the effect of largely reducing the number of defaulters; and after those who have acceded to its requirements have been officially stamped in defaulters' book, a new list of those whom we call notable defaulters is then prepared, and these are summoned in regular form before

A MEETING OF THE BOARD.

There have been several such meetings, and they have invariably been attended with very good results. A hall in the district where the defaulters reside is engaged, and a whole day devoted to the work.

As many members of the Board as possible are in attendance, and a number of officers in waiting, both on account of their evidence, and to produce a suitable effect on the mind of the defaulters.

By a subdivision of the work eighty to ninety cases may be overtaken in a day. The plan adopted has been to bring in the defaulting parents or guardians one by one—to ask the reasons for their neglect, and to allow them to state their case in their own way. The officer who has been visiting them is then required, if necessary, to state what he knows or has ascertained about them.

A large number of these cases are of a very difficult and distressing character. Fixed rules, or hard and fast lines, or strict interpretations of law, are here found quite out of the question.

A FEW TYPICAL EXAMPLES,

selected from different meetings, will serve to show a class of cases which are of a character sufficient to baffle the wisest legislation or the ablest administration.

Here is a toolmaker, earning good wages when at work, his daughter, eleven years of age, not at school. Husband and wife repeatedly found drunk on the floor, and the poor child lying on a sack.

Next comes a print-cutter with two boys, six and eight years of age respectively, who have never been at school. The mother was most anxious that her children should be educated, but her drunken husband spends in whisky the food, clothing, and school fees of his family.

Then follows a wretched cattle-drover, who is in the habit of leaving his family for weeks together without the slightest provision for their maintenance. He has a son eleven years of age, and a daughter eight, not at school. When subsequently brought before the Sheriff, he promised to have them sent, but before he got home from the Court he got drunk, broke a pane of glass in a shop window, and was committed to bridewell.

It is bad when the husbands are drunkards, but how shall we deal with drunken wives?

Here is a glazier who complains that his wife pawns his children's clothes, and takes their school fees for drink. The officer has found this to be true, but states that the husband is himself intemperate.

Here is a family with seven children entirely without education. The wife is a drunkard, and her husband has frequently left her in consequence.

There is a very sad case in which the principal officer received a letter from a highly respectable working man, complaining that his wife had such a craving for strong drink that she sold and pawned everything that came in her way; and that, while he was willing and anxious to get his children to school, he found it impossible on account of his wife's conduct. The statement was found authentic.

While intemperance thus holds the chief place in the cases brought before the Board, it will not, of course, be supposed that there are not many others where hardship, suffering, poverty, and bereavement prevail.

There is a widow with a son and daughter, nine and eight years old respectively, who have never been at school.

There is another with a son, aged eleven years, who has only been two years at school.

And a third with two sons, seven and nine years old, who attend very irregularly.

And a fourth poverty-stricken old woman, with two unkempt miserably clad boys, utterly neglected, but whom no persuasion will induce her to part with.

These are but examples of many poor widows who have been struggling on, some getting partial relief, others none at all; but the difficulty often arises from the mother being out at work, and the necessity of leaving an older child at home to care for the younger ones.

This has not unfrequently been the case with men who have lost their wives, and are left with young families, the oldest girl, perhaps eleven or twelve, being at home with baby.

A poor weaver, earning but 8*s.* a week, has a little illegitimate granddaughter living with him. He cannot get fees from the Parochial Board for her education, but he will not part with the child—his ewe lamb—even if a place be found for her in some orphanage or institution.

There is also a considerable number of deserted wives in daily expectation, they will tell the officer, of hearing from their husbands; but meantime what is to be done with the children?

It is sometimes represented by parents that their children are so unruly that they will not attend school. In such cases the Board has arranged that they shall be sent to an Industrial School. Three cases only have, as yet, been thus dealt with.

One of them deserves more than a passing notice. Joey, aged eight years, was such an adept in street singing, and was so forward and clever, he brought his mother in 2*s.* or 3*s.* a-day. She had been deserted by an intemperate husband, who visited her occasionally. When removed to the Industrial School, Joey was glad to be sent to school 'like other folk,' and said, 'I think I'll come to something yet.' On parting with his mother, he told her 'she was to try and get on without him, and if the auld chap turned up she was to be guid to him.'

I shall only occupy your time with other two out of dozens of similar illustrations which might be given.

A plucky old Highland woman, a widow, with a donkey-cart, has a boy ten years old, who attends to the donkey while she attends to her customers. He had only been six months

at any school. She pled hard to be let off with his attending a night school.

An itinerant grinder, in very delicate health, travels about with his grinding machine, and requires his two sons, aged nine and ten, to help him, otherwise he must abandon his only source of livelihood. He has four younger children. The boys have been partially but very imperfectly educated. What is to be done?

I am unwilling to enter into particulars as to the manner in which the Board dealt with these and similar cases. I will not affirm that in every case they adhered to the strict letter of the law, nor shall I deny that certain relaxations may in some cases have been made where this was possible in the interests of the children as well as of the parents; but I will venture to affirm that neglect caused by intemperance or bad behaviour met with no mercy at their hands.

The consideration of this class of cases would not be complete without some reference, however short, to the necessity for

INDUSTRIAL OR REFORMATORY SCHOOLS.

This necessity exists sometimes in consequence of the ill-behaviour of the children, but is far more frequently owing to the condition into which they have been brought by intemperate and ill-behaved parents. I have referred already to the arrangement by which certain children may be transferred to existing Industrial Schools, but in our great cities we have as yet only touched the outer edge of the question. Undoubtedly a very large number of the children whose cases have been under the consideration of the Board would reap immense benefit by being removed from the custody of their parents or guardians, and from the contamination of such wickedness and crime as daily and hourly surround them on every side. In fact, for certain of the cases there seems no other solution. And yet the very greatest caution and consideration must be exercised before proceeding hastily in this direction, lest the parents of such children should thereby be encouraged to believe that the neglect of their children is the likeliest way to be relieved of responsibility towards them altogether.

The consideration of this question in its more comprehensive aspects is as yet delayed by the settlement of the larger question in connection with that numerous class of children who are being got into the ordinary schools. But when this latter question is settled, as it is in a hopeful way of being settled, the far more difficult question will remain, How shall the

children of immoral, intemperate, and utterly poor and degraded parents be best dealt with? In view of the consideration of this question, which ere long will force itself prominently on the attention of School Boards, I would humbly suggest that, in amending the Education Act, the Lord Advocate should be requested to allow a portion of the rates to be applied by School Boards in our large cities to the maintenance of one or more Industrial or Reformatory Schools. The Act gives power to erect such schools out of the rates, but it is not clear whether the rates may be applied for their maintenance.

The defaulters are, by the various processes to which I have referred, reduced to a small number, with whom it is necessary to deal by

PROSECUTION.

I believe the number whom it may be necessary to prosecute will become smaller as the decisions of the Sheriff and the punishment of offenders become more widely known.

Some men, for example, have been neglecting their children's education on the plea that their large families and small wages entitled them to fees from the Parochial Board. When it is seen that the Sheriff is disposed generally to agree with the decision of the Parochial Board in cases where aid is refused, they will be less likely to wait until pulled up by prosecution.

Printed bills containing a statement of some of these cases, with the Sheriff's decision and fines imposed, are being distributed as a warning in houses where neglect of education prevails. The parents hitherto proceeded against by prosecution have only amounted to twenty-one; about half this number have been convicted and fined. The other half have been allowed to escape penalty on the promise that they would send their children immediately to school, which they have since done.

The School Board is extremely unwilling to have recourse to the extremity of law, and it is only after every other means have been exhausted that they proceed to this extremity.

It will be seen by the foregoing sketch that the defaulters in a district are pretty well got at, and not allowed much rest; but here a serious question arises with reference to

IRREGULAR ATTENDANCE.

You have succeeded, it will be said, in getting nearly all the children of a district sent to school, but what security

have you that they will remain there? May they not be withdrawn the very first week after they have been enrolled?

This difficulty has been met in the following manner:—

After the educational inquiry has been completed in a district, which is generally done by five or six officers working in concert, one officer, or two if the district is large, is appointed permanently to remain there. He makes a round of the schools in the district every week, and gets a return from the teachers, on a printed form previously left, of all the children who have been absent or irregular in their attendance during the week preceding.

The parents of such children are then visited, and a report given in to the principal officer of the excuses given, who either admits them as reasonable, or, if otherwise, deals with the parents as defaulters.

It is also the duty of the district officer to keep a list of all sick children, and look after their return to school when convalescent.

His constant attendance in one district makes him familiar with the locality and with the people; and he is thus able to keep his eye upon new-comers, to note changes of residence, and to look after the waifs and strays who may have no settled home.

It may be proper also here to state that a regular system of communication exists between the School Board officers and the Sanitary Department of the city, whereby immediate notice is mutually given by the one to the other in cases of infectious disease.

RESULTS.

I shall, according to promise, give a short summary of the results which have accrued from about twelve months' operations in the manner I have indicated.

An educational inquiry has been made in five out of the twelve registration districts of the city, revealing that out of a total number in these five districts of 39,578 children, from five to thirteen, 21,849 were in regular attendance at school, 7,923 had reasonable excuses for not being at school, and 9,806 were not at school without excuse. Other interesting information was obtained which, when the entire inquiry over the city is complete, will be of considerable value, but with the details of which I shall not burden this paper.

As to the results of dealing with the defaulting parents of children 'not at school,' these have been successful exactly in proportion to the length of time the officers have been en-

gaged in any given district. In Calton, for instance, which was the first district taken in hand, there were 1,425 defaulting children on first inquiry. These children have been got to school or satisfactorily accounted for otherwise, with the exception of twenty-four children still under dealing. In the other four districts precisely similar progress is being made towards a like result. Time will not permit me to give full particulars, but of the 9,806 children in the five districts not at school when the inquiry was instituted, upwards of 5,000 have, during the course of the last ten months, been sent to school.

I may here be allowed a word or two in reference to

THE PERMANENTLY INFIRM AND IMBECILE CHILDREN

discovered during the course of these investigations, few or none of whom, it is believed, will ever be able for school; of these there has been a total in the five districts of 150 children from five to thirteen. They are classified as follows:—

	Blind	Deaf and Dumb	Permanently Infirm or Deformed	Imbecile
Boys . .	4	9	37	16
Girls . .	9	11	43	21

Nothing could be more harrowing than a recital of the condition in which some of these poor children were found. I cannot enter upon this now; but it is gratifying to be able to state that, as soon as the facts were made known, an association was formed in Glasgow, mainly composed of ladies, for visiting and aiding them. Those who have been found fit subjects for existing institutions, as the blind or deaf and dumb, are being sent there; very few have been classed among the permanently infirm children who are suitable cases for admission into the infirmary. They are mostly afflicted with incurable diseases, from which they are not likely to recover. A medical man has been appointed to visit them in their own homes. Several are in circumstances so distressing that it has been deemed advisable to secure a cottage home in the suburbs, whither it is intended to remove the most clamant cases.

It will not be deemed out of place if I here make an appeal to the citizens for funds to carry on this Association and the home in a manner worthy of the object contemplated. A meeting will shortly be intimated, when details will be more fully given; but meantime I hope contributions from the

smallest to the highest sums will begin to flow to the account opened in the Bank of Scotland for the Association and its newly acquired East Park Cottage Home.

I may now be permitted to offer in conclusion

A FEW GENERAL REMARKS

on the compulsory clauses of the Education Act, and on one or two cognate questions.

As to the clauses themselves, I believe they will be found either very good or very ineffective, according to the manner in which they are wrought. They contain motive power of a most efficient kind, but it is of little value until applied to proper machinery. If the power is not used, or if it is used inefficiently, the blame does not lie with the Act.

Thorough protection is given to the parent against oppression, by the provision that a reasonable excuse exempts from any interference or dealing by School Boards. The term 'reasonable excuse' gives pretty wide discretion, but the interpretation, where there is doubt, invariably leans to the parents' side, and, on the other hand, the Education Act leaves the Board perfectly free to exercise its own judgment with regard to the compulsory powers conferred upon it by the Act.

I may remark that the compulsory clauses are not specially applicable to School Board schools; their provisions extend to all schools where anything with the name of education is given. It is left to School Boards to satisfy themselves that elementary education is really being given, and where they are not satisfied that such is the case, the mere name of a school ought not to stand between the Board and its dealing with the parents. Owing to want of school accommodation, it is meantime a painful necessity to wink at certain schools which will not be tolerated a day after new schools are ready. I have in my possession a certificate brought to the Board by a defaulting parent from the so-called teacher of an adventure school. It is wretchedly written, and in six lines there are no fewer than some half-dozen egregious blunders. In any amendment of the Education Act it would be of advantage to confer direct power on School Boards to judge of the efficiency of all schools within their bounds professing to provide elementary education.

HALF-TIME AND NIGHT SCHOOLS

have an important bearing on the compulsory clauses of the Education Act.

It will be impossible within the limits of this paper to discuss the merits or demerits, as the case may be, of such schools, and their effect upon the education of the children of the labouring classes. One important fact I may notice, that after next year half-time education will not be allowed before children are ten years of age, while night schools are even now not recognised for children under thirteen years of age.

This leaves the Education Act a fair field, without any interference either from half-time or night schools in regard to all children from five to ten years of age; and if good use is made of these early years for laying a good foundation of elementary education, I think that, *after ten*, half work and half school—provided the schools are really of an efficient character, and the regulations for attendance more carefully watched than hitherto—is a system which may with advantage be much more largely developed than it has hitherto been. Half-time and night schools, owing to the present state of education, must still be to a large extent elementary, but I look forward to the day when the higher branches of education shall be there largely prosecuted by those who have been thoroughly grounded in the rudimentary elements by their regular day school attendance in earlier years.

It has frequently been suggested that no child should be permitted to earn wages without having received a fair amount of elementary education. It is too much lost sight of by those who urge this suggestion that the Act deals with employers of labour on this very subject, and insists on their becoming responsible for the elementary education of all children under thirteen in their employment. It is true that a formal notice by the School Board must be served upon the employer previous to his being subjected to penalty, but the fact remains that every employer with a child in his employment under thirteen years of age insufficiently educated is breaking the spirit, if not the letter, of the law unless he sees to that child's elementary education.

The provision in the Education Act requiring parents in poor circumstances to apply to

THE PAROCHIAL BOARD

or school fees has given rise to a good deal of discussion and difference of opinion.

Many would have preferred that in such circumstances the School Board should have liberty to pay fees or grant free education. They believe that sending parents to the Parochial

Board for such a purpose tends to degrade and pauperise them.

There is, no doubt, a large amount of truth in this objection; but the balance of argument is, I think, in favour of maintaining the present system. As a rule, the parent who is struggling, it may be, to maintain himself and his family without relief, will scarcely allow the 3*d.* or 4*d.* a week necessary for school fees to drive him to the Parochial Board.

The chief difficulty lies with poor parents whose children are earning wages; and it is evident that no free education by the School Board could make up to the parents the wages their children were earning, or prevent them in their altered or straitened circumstances from applying to the Parochial Board for relief. In most cases the difficulty is not with the fees, but with the loss of wages earned by the children.

But probably the consideration having most weight with the framers of the Bill would be the fact that, when the fees are thus provided by the Parochial Board, the parents may select whatever school they please, and there is no doubt this gets rid of a serious difficulty which would always stand in the way if it were only School Board schools which were available for poor parents.

One more reason I may state in favour of the present mode. It is absolutely necessary to employ skill and experience for investigating the circumstances of the great bulk of those who apply for free education. Only those brought into actual contact with such work know how necessary it is to institute inspection of a very thorough and searching kind, and how frequently intemperance, deception, or misconduct lie at the foundation of such appeals. School Board officers have no special training nor aptitude for this kind of work, and such inquiries would entail the setting up of an inspection department, which would be both costly and difficult.

A defect which may easily be remedied has been pointed out by Sheriff Galbraith. The Parochial Board may, after investigation, refuse to grant fees to an applicant. The Sheriff, if the case is brought before him by the prosecutor of the Board, may admit that the parent has a reasonable excuse from poverty for not educating his children, and there is no court of appeal. I do not anticipate such collisions; it is well, however, that this defect should be pointed out.

I cannot close without expressing my opinion that the manner in which the Scotch Boards have adhered to the time-honoured custom of having the

taught in the schools has given a feeling of confidence to the parents of Scotland with respect to the new educational system, which makes the carrying out of the Act far easier and more satisfactory than it would otherwise have been.

Education in Scotland, even elementary instruction, has never been limited to the three R's. The system of Mr. Stow gave an impetus to moral and religious training which even before his day had been to a large extent use and wont in the schools of Scotland.

The character borne by Scotchmen in all parts of the world has been earned not only (perhaps not chiefly) by the elementary instruction received by them in early years, but by the manner in which their heads and hearts have been brought under the influence of what is good and pure and true.

I trust that this Association, which aims at promoting the interests of social science, will lend its aid towards the encouragement not only of such results as flow from mere mechanical instruction, but will use its influence towards the promotion of an education which shall fit the youth of this realm for being worthy citizens, faithful patriots, and good men.

On the Same. By Thomas Chatfeild Clarke.

THERE would seem to be good reasons why some explanation may be usefully given of the work of the only School Board directed by the Act of 1870 to be formed, without leaving any choice to the ratepayers. The magnitude and novelty of the work, combined with the experimental character of much that had to be done, must be the excuse for any mistakes committed.

The first Board consisted of men of every type and shade of opinion, all, nearly without an exception, bent on the earnest prosecution of the work to which they had been called by the voice of ten metropolitan constituencies. The problems o be solved were shortly these—

1st. How was it possible to ascertain the number of those or whom school accommodation was requisite?

2nd. How was the information best to be obtained of the nount of accommodation for teaching the classes specified by ie Act, and how far was such accommodation efficient?

3rd. How could rules for compelling the attendance of

children at school be framed so as to be effective, without being unduly harsh?

4th. How far was it possible to frame a scheme of education for the new schools in harmony with the the standards and requirements of the Education Department, but somewhat more elastic, and superior in its provision for a more thorough training of the scholar's mind?

5th. What plans could be devised for providing a better class of school building and of class division, and with what rapidity could such be supplied, meanwhile hiring temporary premises to commence the work?

To meet these various heads several committees were formed, each prosecuting its object by the aid of all the means it could gather.

The statistical wants were met by a census taken throughout the Metropolis at no little cost and pains, and with the aid of all the Government information. The results of such an inquiry are substantially these: that it was ascertained there would have to be provided accommodation for about 120,000 children.

Further inquiry and inspections have been largely made to ascertain the amount and the efficiency of the school accommodation existing, and for giving every facility for that being made efficient which had not hitherto been so.

Much trouble and evidence was taken before any plan was decided on, or rules framed for compelling the attendance of children at the schools; and the bye-laws and regulations of the Board as now existing have from time to time received much modification to adapt them to the needs of the Metropolis.

It cannot be denied that they have, through the agency of the visitors, the superintendents, the magistrates, and local committees, had the effect of inducing belief in the minds of the poor that henceforward *their children must* be educated, and no less than 85,000 have been brought into efficient schools through such means, that number being the increased average attendance.

The scheme of education adopted by the Board was the result of an elaborate inquiry, presided over by Professor Huxley, at which some of the most practical educationists in the country were examined.

It is the less needful to refer to it fully, as it has met with very general approval and adoption by many other Boards; but, of course, in the Metropolis specially it has been necessary to be contented with far less than the scheme indicates, from

he primal ignorance of the great mass of the children brought into the schools.

The necessity for an earnest consideration of the question of the best class of school building was, from the first, apparent to many members of the Board.

Of course this question is primarily bound up with the system of teaching and the standards defined by the Departments; but the Board has done all in its power in the great majority of its buildings to render classification and division more complete than in the old schools, and has also erected a school on the Prussian system of class division. Further than this, no improvement that could be reasonably provided in the way of open and covered play-grounds, hat and cloak rooms, drawing rooms, masters' and mistresses' rooms, lavatories, and many other adjuncts, are wanting to render the new schools at once commodious and convenient; whilst the question of cubical capacity to each child, lighting, ventilation, and warming have been studied.

In order that no time might be lost, and to meet the demands of an impatient public, many temporary buildings were hired, to be dispensed with as the new buildings became ready; many schools have been permanently transferred to the Board, and many others it is anticipated, will ultimately follow. It may not be uninteresting to note that the Board have erected, or is under contract to erect, or is about to provide, buildings costing about 1,350,000*l.* with the land, and furniture, &c.; and there will be accommodation in such buildings for 108,000 children; further, that the total number of children now under the care of the Board is nearly 60,000, and that scarcely is any new school opened without its being filled, or nearly so, without delay. The new schools seem popular; the children are found to improve in general appearance and bearing, and there is every reason to hope that the effects of the work of the Board may not only be educational, but humanising and elevating in its tone on the poor.

No sketch of the work of the Board would be in any sense complete which did not refer to the teaching power, and to their efforts to obtain the best available results. It was felt, and generally acknowledged, that the remuneration of teachers under the voluntary system was inadequate; the action of the Board has been to increase the salaries and stipends of all grades of teachers. The effect has been to draw to the Board schools many good teachers, but it would be idle to deny that, in some departments specially, the teaching power is not adequate to the wants of a good school, and that the enforced

reliance on pupil teaching is a subject of regret to many of those engaged in the work. To facilitate the entrance of good teachers to our schools would be one of the greatest boons to the work of education in the Metropolis.

There is another section of the work of the Board which has been steadily pursued from the commencement, and that is, carrying out the provisions of the 'Industrial Schools' Act;' and by this means no less than 1,550 children have been sent to various parts of the country. The Board, at a very early stage of its proceedings, appointed officers to exclusively deal as vigorously as the law permits with this class of cases. Considerable contributions have been made towards the enlargement of many institutions, but in addition to this one school has been established by the Board itself, and though, of course, this is looked at as experimental at this moment, there seems no reason why it should not equally succeed with others; and it has this advantage, that the Board are spending money on that which is wholly under their own control.

The work of this Board consists, therefore, not wholly of its weekly meetings in public, but of standing committees, on two of which each of the forty-nine members must serve; of many and various sub-committees; of occasional special committees; of the superintendence of the work in each division of the Metropolis in the execution of the bye-laws, and the sifting of appeal cases before recourse is had to a magistrate; of the general supervision of the schools in each division; and of a large amount of correspondence in the necessary conduct of the work.

No single portion of the work is left without the supervision of a committee of the Board; no teacher is appointed, except personally seen; no payment is made, except fully and accurately vouched for; and it is believed the public have little idea of the amount of detailed labour that has been carried on, aided, as the Board has been, by an executive at once able and earnest in the work.

I referred, in the earlier part of these notes, to the *first* London School Board, presided over by Lord Lawrence; it is my duty to refer to the second Board, formed in November last.

Though the first Board were accused of dilatoriness in commencing their work, before the second election all was changed. It was said the Board were doing too much; what they were doing was on the most extravagant scale; the ratepayers' money was being squandered; voluntary schools were being superseded; and that the Board were recklessly injuring private schools.

The cry thus got up had the effect doubtless of returning a considerable body of men to the Board, pledged to the support of voluntary schools, to economy, and to support a general policy of lessening the activity of the work of the Board. No sooner was such new Board elected than the statistics of the former Board were challenged, but, it was generally admitted, not seriously impugned. On the question of economy it was ascertained that, in many respects, adequate provision had not been made for play-grounds, care-takers' houses, and such like, from the desire to keep down the cost of the schools; and on the point of the injury to voluntary schools, it was found that they shared with the new Board schools in a considerable accession of numbers, where they were efficient, and where the fees were suitable for the locality as respects the means and earnings of the poor. Small and insufficient private schools, mostly taught in rooms of insufficient ventilation and inadequate teaching power, had to succumb; but this arose, not from the action of the London School Board, but from the provisions of the Act itself when honestly, fairly, and impartially carried out.

I speak from experience when I say that the great majority of the respectable London poor, who have come before me, look on the operations of this Act with favour—that they recognise the advantage it will be to their children; that the new schools are popular, and that only in exceptional cases do they resent the action of the School Board visitors in their efforts to get the children into school. Below this class is that most difficult to deal with—the migratory and half-pauperised among the poor, often lost to self-respect, regardless of their children's welfare, debased by drink and dissipation, and unwilling to make the slightest sacrifice for their children's schooling. These are the parents we are compelled to prosecute and summon before a magistrate. It cannot be said that the magistrates have dealt with them harshly; on the contrary, it has often been difficult to get a conviction; but I am strongly convinced if once they see the magistrates are in earnest, prosecutions will be less frequent, and the parents will accept the necessity laid upon them.

This short paper is not intended as a discussion of principles, or those which have actuated the majority on the London School Board. If such were discussed, it might be said of the *first* Board that a spirit of compromise was its actuating and ruling spirit; of the *second* Board, with its parties more exactly defined, and probably consisting of men of more extreme opinions on both sides, this could hardly be hoped for;

nevertheless, it is felt that the trust imposed by the Legislature to remedy the great defects of educational provision, must go on, and for the present, at least, many of those deeply attached to the voluntary system see it go on side by side without any reason for alarm.

When I speak of compromise, I refer more especially to the subject of religious teaching in the schools. Here, under the resolution of the first Board, whilst religious teaching was to be held in every school at the appointed period, much was left to the individual teacher in the way of expounding the Scriptures; and though considerable freedom was given, it was felt in the hands of a worthy teacher no advantage would be taken. To those who feel that the State cannot properly share in the religious training of the people, this could not be wholly satisfactory, however much they would rejoice in any deeply religious spirit being infused into the minds of the young, if such should be the effect; but when to this it has been agreed through resolutions of the second Board to accept sums of money from private individuals and members of the Board of very pronounced opinions, and when to obtain these prizes, examinations in religious subjects are to be the means of obtaining such rewards, it was felt by many that a great error had been committed. It was acknowledged on all hands that the intention was to do good, but, at the same time, it was felt it was an egregious mistake to attempt to confine the religious teaching to any one set of theological opinions in schools which should be national in their character—open to the children of all communions, and the truth compels one to say, largely attended by the children of parents who, whilst unfortunately neglecting the offices of religion themselves, look upon the connection of their children with different churches too often as a means of helping on their own worldly advantage.

It is clearly impossible at this early date to predict what may be the result of the work of the London School Board. At present it may be summed up thus:—

1st. That the operation of the Act in the Metropolis discovered an absence of proper provision in the Metropolis astonishing in its extent.

2nd. That much of the existing provision was inadequate as to the class of buildings, and most inefficient as to the character of the teaching.

3rd. That the attendance of children at the schools has been of the most irregular and unsatisfactory character.

4th. That in those neighbourhoods where good schools were most wanted, there the deficiency was the greatest.

5th. That in spite of the earnestness and success with which many voluntary schools and those supported by State aid have endeavoured to meet the wants of the Metropolis, the demands of so great a population could *not so be met.*

It has been the effort of those who have worked in the Board to meet all these defects; and I am sure every earnest friend of national education will join with me in the hope that they may be successful.

Mr. JOHN F. MOSS, Clerk to the Sheffield School Board, read a paper on the question, with special reference to 'Compulsory Education and the School Board System.' In reviewing the early progress of School Board work, he quoted statistics showing, amongst other results, the increase which had been caused in the number of children attending efficient elementary schools in large towns where bye-laws under the 74th section of the English Act had been for some time in force.

New buildings to meet large deficiencies in school accommodation were being furnished in rapid succession, but the task of completing the work of enforcing the attendance of children whose parents cared nothing about education would be found difficult, delicate, and trying. With regard to the same school difficulty he urged that the inspection of both teachers and school buildings by competent authorities should be made obligatory. The continuance of an inefficient school should be considered as an injury to society, and proper means should be afforded of treating it accordingly. The temptation to 'buy a rod and turn pedagogue,' when other means of gaining a livelihood had failed, should be effectually removed.

Among other means of inducing regularity on the part of children, and silencing frivolous excuses on the part of parents where neglect was detected, the system was recommended of issuing school attendance certificate cards to all efficient schools, upon which a return could be furnished for the inspection of both parents and school-attendance officers, showing the number of absences each week. Both managers and teachers should co-operate heartily with School Boards in checking the evil of late attendance. Teachers should also be loyal to each other in discountenancing the frequent removal of children from school to school. It was suggested that some such provision should be added to the English law as is already embraced in the 72nd section of the Scotch Elementary Education Act, whereby an employer becomes liable to a penalty if he accepts the services of any child under the age of thirteen years who has not attended school regularly for at least three years, and

is unable to read and write. Upon the general subject of compulsion he was of opinion no half measures would succeed, and that whatever difficulties arise must be fairly but firmly met. The wisest policy was to secure as far as possible the sympathies of the great masses of the people, and yet act decisively with recalcitrants whom reasonable persuasion and timely cautions fail to move to a proper sense of their duty. That in some cases the operation of the law might entail hardship upon individuals it would be idle to deny. There would be difficulty sometimes in deciding how far the struggles of the independent poor for bare existence should be interfered with. But it seemed rather a subject for philanthropic effort than for any modification of the law. The defaulters did not usually belong to the class of honest hard-working poor. On the other hand, cases were cited showing that it was sometimes greatly to the benefit of families that they should be driven to seek shelter in the workhouse rather than be allowed to subsist on the scanty earnings of children growing up in ignorance, or worse, amid squalid misery and temptations to vice and crime. The difficulty of 'minding the baby' should be met by the establishment of day nurseries or by other means, and the solution of other questions which might be urged should be met by similiar measures. On the whole, he was sanguine enough to believe that the obstacles to the progress of universal education were not such as to warrant any doubt as to ultimate success, and he trusted the day was not far distant when compulsion would be little thought of, by reason of the absence of any necessity for its extensive enforcement.

Mr. JOHN A. BREMNER, of Manchester, also read a paper on the question. He said that Manchester is in a special manner identified with the Education Act, having, at a town's meeting in the year 1866, approved the principles of local rates in support of education, and of compulsory school attendance. The results of the Act in Manchester, however, have not realised the expectations formed. The collision between the sects and parties which the machinery of the new legislation precipitated led to a temporary dead-lock in 1870 at most School Boards, and to this Manchester proved no exception.

School Provision.—The educational census required by the Central Department in 1871 showed a total of 58,557 children in the city between the ages of five and thirteen years, for whom school provision was required. Against this the existing and projected school accommodation amounted to only 50,207, leaving a deficiency for 8,280 children to be forthwith supplied. Three

years have elapsed since the publication of these facts. The first Board has given place to a second, and now the second school authority is engaged in a re-examination of a long since ascertained deficiency. Meanwhile, the denominations have shown a laudable zeal in availing themselves of the opportunities which the Act affords of filling up gaps of school supply. The Board also have four new schools in course of erection, having capacity for about 2,800 scholars. But, so far as actual and available accommodation goes, a deficiency of 6,000 to 7,000 places at this moment exists. This position no doubt renders the Board liable to be declared 'A Board in default.'

A Special Committee is now considering the whole subject of school supply. In a populous city school accommodation cannot be estimated on a plan of rough averages. The real point is, are existing schools in situation convenient and accessible to the children? To answer this, the Committee is abandoning the principle of one in six of the population as a standard. The whole city is being mapped out in circles of one-eighth of a mile radius, the position of a Protestant school being the centre of each circle. It is felt that a surplus of denominational schools in one district is valueless to another in which a deficit exists. 'Compulsion' cannot be justly enforced in these crowded haunts of the poor, unless schools are brought near to the homes of the children. A claim is also being pressed for a Board school in each district, to meet the wants of those having conscientious objections to their children's attending sectarian schools. Under these circumstances, the final recommendations of the Committee are awaited with interest.

The Religious Difficulty.—During the present year the Board shook hands over a scheme of simple Christian teaching for its own schools. A basis of religious teaching common to all and satisfactory to all being laid, a wide door opens for future operations. Why should not the schools of the sects be in time absorbed in those of the municipality? This compromise marks an era in the march of educational progress in Manchester.

School Attendance and Compulsion.—In December 1871, one-half of the children in the city of school age were not under instruction. Only 24,290 were in average attendance, against a total of 48,311 who ought to have been at school. Yet an entire year was allowed to pass by before the adoption of the 74th section, giving the Board power to compel attendance at school.

The 25th Section.—Compulsion being applied, school pro-

vision for the children of the very poor was imperative. With this end the Board unanimously adopted the 25th section of the Act, enabling them to pay the school fees for necessitous families. The unanimity of this step is creditable to the then members of the Board. There were vacant places in existing schools, there were neglected children in the streets, and all that was necessary was some authority to bring such children within the educational circle. The censure which the Board has incurred in this matter can only be from the much larger expenditure of Manchester than in other places. In the year 1873 to 1874, of a total of 5,820*l.* paid by all the School Boards in England, Manchester stands charged with 2,537*l.*, or 43½ per cent. of the whole. This certainly demands explanation. In defence it is urged that the Manchester Board adopted a systematic scale to test the genuineness of each case; nor can it be said that the scale of poverty was too liberal towards the applicants. How, then, is the excessive expenditure to be accounted for? It can only have arisen from the generally too lenient policy pursued at the Board. While some members have rigidly sifted the plea of poverty, others, impelled by a mistaken feeling of tenderness, have become the victims of imposition. This is destined to find a speedy remedy.

Mode of Carrying out Compulsion.—The machinery for carrying compulsion into practice is of an elaborate and costly character. This is unavoidable. The city has been divided into sixteen school districts, to each of which a visiting officer is appointed. The duties of these officers are of a serious and often perplexing character. They have to inform themselves of the absentees from school; to follow such to their homes, and to issue warnings, notices, and police summonses to the parents, according to the character of each case. Special officers are assigned to carry out the Industrial Schools Act. The duties of members of the Board in this department are also of an onerous character. The 'Rota,' or Examining Committee—at which negligent parents have to appear, or those seeking school exception on the ground of sickness, or of the child's educational attainments—imposes on the presiding member of Committee the joint work of magistrate, medical officer, and school inspector. No wonder if mistakes have been made.

Unqualified success could not be expected on a first attempt to grapple with difficulties so novel. The first announcement of 'compulsion' in Manchester, however, had a stimulating effect. The placards on the walls breathing fine and imprison-

ment attracted public attention and public approval. Managers and teachers of schools were sanguine of the result, while the vicious and improvident prepared for compliance with the law. At this moment, had the Board stood bravely to its colours, what blessings would have followed! If their courage was daunted when face to face with the reeking mass of humanity which week by week came up before the 'Rota,' or Examining Committee, was it to be wondered at? How difficult to unravel that tangled skein of real suffering and honest poverty, jumbled together as it is with vice and knavery. The plea of domestic necessities, of pressing need for chidren's earnings, prevailed over the stern duty of standing by the children. In an evil hour the 80 per cent. of school attendance required by the bye-laws was reduced to 50. The intelligence quickly spread that the Board would not proceed against parents whose children made one-half of the full attendances. Practically this amounted to universal half-time. The Board intended the 50 per cent. as a minimum, but it became the parents' maximum; many children previously returning 60 or 70 per cent. now dropping down to the 50.

School exemptions have also been too liberally granted. To allow children immunity from school on the ground of their entering occupation in which they must occasionally sign their names is a wrong to such children. This is just the crucial point at which the family's conveniences or necessities come in collision with the children's rights, and the latter should be vigilantly guarded by the school authority.

With a view to the avoidance of such errors, a Special Committee is now sitting. During the course of an elaborate inquiry into the Board's compulsory policy, opinions have already been received from teachers in the elementary day-schools of the city, from the officers of the Board, from guardians of the poor, and others, including the Lord Bishop of the diocese. This singularly interesting and instructive mass of evidence points all in one direction. The too lenient policy of the Board has been fatal to the objects of the Act. An immediate return from 50 to the original requirement of 80 per cent. of the full attendance is recommended. In the main, half-time school exemptions are condemned, being held to be, in the great majority of cases, simply the means of vicious indulgence by parents. Provident decent families prefer to keep their children at school. On the question being asked, 'What should be done, should the refusal of half-time exemptions drive families to parochial relief boards?' it was boldly answered, 'That children's educational interests have a prior

claim, and that, as a matter of fact, very few of these applicants would seek or require pauper assistance at all.' The declaration of such principles from persons familiar with the class referred to indicates an approach to something like solid ground in this question. It was further recommended, by those giving evidence in this inquiry, that the more serious cases of alleged sickness, as an excuse for school absence, should be attested by a medical certificate, and that the standard of attainments of children should be verified by a school inspector's certificate.

Useful lessons are thus being gathered for future guidance. Let those who waver in their decisions at these School Board tribunals reflect on the weighty issues placed in their hands. One of two courses is open for adoption — either to emancipate these children from the unhappy circumstances of their birth, and to give to them—the most to be commiserated portion of the rising generation—a fair start in life; or, by yielding to the pleadings of improvidence—or, it may be, of real suffering—to literally fail in a manifest duty to otherwise unprotected and helpless childhood. The very object of the extraordinary powers wielded by School Boards is to rescue such children from their forlorn condition. A murmur of dissent rises at the cruelty of putting such pressure on struggling families. But why are such persons in penury and squalor? Because there was no School Board during their wretched childhood to rescue them from the vices of their own fathers and mothers. Are we, then, to go on perpetuating this hereditary ignorance and depravity? The blow—cruel it may seem—must one day be struck, and, if so, the sooner the better. But is it cruel? To what, in most cases, is the child's education sacrificed? To some mere habit of waste or mismanagement at home, or some vicious excess which, by long indulgence, has become a second nature. Only let School Boards boldly say to such parents, 'Sacrifice your own self-indulgence, and not your children's rights;' and let them bravely stand by the children, and society in England will applaud.

All these arguments, however, must not be taken to mean that mere force will accomplish everything. In a rigorous application of compulsion some hardship must of necessity be done. This is inevitable. But it is a School Board's duty to be hard before the masses can be taught what to a dissolute generation must be a bitter lesson—that the children's schooling is to come first, drink and dissipation second. To found a general policy on a few exceptional cases of hardship, as has been done in Manchester, is a fatal error. Exceptions must be met, as

they arise, by exceptional consideration. In this branch voluntary agency may usefully step in to the Board's assistance. Widows called out early in the morning to work, and not returning till night, being compelled to leave their children to the care of others, can scarcely be held responsible for truancy. Day nurseries or day-homes, where a small charge is made for receiving and feeding such children during their mother's absence, offer an important field for voluntary enterprise. The work would embrace widowers similarly placed, and some families even where father and mother are away all day, and might include cases of non-attendance at school through insufficient clothing. In the absence of power by the local authority to make provision of this character, the establishment of these places of reception in populous towns is for the present a necessity, in order to secure a perfect and universal application of compulsion.

In taking leave of this portion of the subject, it is imperative, for a perfect working out of compulsion, that the various parts of the machine should hang well together. There are four parties concerned in the matter—the Board, the officers of the Board, the magistrates, and the parents. The Board should firmly support its own officers when oft-offending parents appear to answer for their delinquencies. The magistrates should uphold the authority of the Board in all cases. The preliminary processes of warnings, monitions, and forbearance have been exhausted before reaching the police-court. The Board has already tried the cases in detail, and the court has little else to do than re-hear the evidence and pass sentence. The fact that many bad cases are 'let off' or adjourned for a month, which amounts to nothing, has a damaging moral influence out of doors. The Board's authority is thereby weakened, and the final process of prosecution loses its terrors. School Boards include among their number magistrates of experience. Surely advantage would arise from such persons being allowed to adjudicate on School Board cases. At present a feeling prevails against the propriety of this.

Indirect Compulsion.—The lever of indirect compulsion should also be utilised. School Boards may well ask for their heavy task to be lightened. Why should not legislation come to their aid by an extension of the principle of the Factory and Workshops Acts? The law at present has it that children shall not be recipients of wages unless attending school a portion of their time. Carry this a step further and say, children ignorant of the rudiments of knowledge shall not work for wages at all. It is the same in principle, that school and

work go together. The result would be that parents would eagerly rush to qualify their children for work by sending them to school. Self-interest, after all, is the best school officer. If a few years' notice of the changes were given there would be no hardship. The work of School Boards would be greatly relieved, and the responsibility put on the right shoulders, namely, those of the parents.

Industrial Schools.—The Board has exercised its powers under this Act with scrupulous caution. There is great danger of unprincipled parents ridding themselves of their natural duties to their children. Juvenile criminals, incorrigible children, and such others, have been promptly adopted. But it is an error to suppose that legal power exists to clear the streets of all 'gutter children.' The children must first come under the definition in the Act. As a matter of fact, many such children of wild Bohemian aspect in Manchester, selling newspapers, &c., on investigation are found to belong to families of decent means. The children are simply neglected. A sharp application of compulsion on this vicious class of parents is the only remedy.

A total of 363 children have, through the instrumentality of the School Board, been committed to Industrial Schools during the last four years. The cost to the city, after deducting the Treasury allowances, cannot be less than 2,000*l.* per annum, and must go on increasing. Unfortunately the contributions of parents are but fractional, which is contrary to the spirit of the Act, and an encouragement to immorality. The error lies in the central department retaining the power to decide what amount parents shall pay. This is the function of the locality to which the case belongs, and, being little else than a question of payment of school fees, should now be left to School Boards.

General Results of the Board's Operations.—The value which the ratepayers have received for the great cost of a School Board is found in a nutshell in the following progressive statement of

Returns of School Attendance.

Date.	Average.	Actual.	On the Books.
December 1871 . . .	24,290	28,658	38,992
December 1872 . . .	29,528	35,756	44,881
December 1873 . . .	33,000	40,000	50,000

In the course of two years of compulsion, the 'average attendance,' that is, children for the most part regularly at school, has been raised by 8,713; while 11,000, under the head of 'actual,' has been added to the numbers who are occasionally

at school. The 'actual' is to be interpreted to mean those who have been at school at all, if even only one attendance has been made. Some of such may be only 'paper scholars,' as any change of school would lead to a certain number appearing on the register of more than one school. The true state of matters is to be learned from the column of average attendance. By this it appears that of the 24,000 children untouched by educational agency in the year 1870 in the city, 8,710 had been caught in the School Board net by the end of the year 1873, leaving at that time about 15,000 yet to be dealt with. In the absence of precise returns for the present year, and assuming that the same rate of improvement has continued, it is a fair estimate to say that about 10,000 children now remain who have yet to be brought under instruction. So that, if my calculation for the year 1874 be correct, compulsion has virtually rescued during the three years 14,000 children from a condition of partial or entire ignorance and neglect. While such a result is a sufficient answer to those holding heretical opinions on the compulsory doctrine, it is an encouragement to the Board to persevere in a more thorough application of the principle. The figures just quoted seem forcibly to illustrate the urgent need for this. Those who attend school only by fits and starts in two years increased by 11,000, while the numbers of the more regular attenders went up only 8,710. Surely, had this leniency been shown, many more of these casual scholars would have been added to the ranks of real school children. The argument gains strength also from the fact, that at the close of the year 1873, though 50,000 children were enrolled in the books of the schools, not more than 30,000 ever made an approach to regularity of attendance.

At the end of September 1873, a total of 6,287 orders for the payment of school fees were in force. And as this payment of fees must necessarily go on increasing as further inroads are made on the 10,000 yet untouched, free scholars must soon represent, at a moderate estimate, at least 25 per cent. of the whole. Surely this points to the propriety of erecting a limited number of free municipal schools, planted here and there in the most densely-populated and lowest parts of the city, as moral breakwaters to resist the tide of vice and depravity. For the most part, these schools would be used only by those for whom they were provided. The aristocracy of the industrious circles would shrink from sending their children to such schools, erected as they were for the poorest and most destitute. Existing schools would be relieved of a

class of children whose status renders them in a sense undesirable. Ratepayers, also, who murmur at paying fees to denominational schools, on the ground that the representatives can exercise no supervision over the quality of instruction therein, would be satisfied. And to all reasonable minds the grievance of the 25th section would be reduced to a minimum, if not entirely disappear, while the children even of the lowest would enjoy the simple Christian teaching which the Manchester Board has already adopted.

Fully 90 per cent. of the free school orders issued by the Board have been used, and the children thus sent to school have averaged fully 70 per cent. of the possible attendances.

Conclusion.—While a frank outspoken statement of facts is necessary, it must be admitted, if errors have been committed by the Manchester Board, they must also have occurred at others. This was inevitable in a first essay of the 'Prentice Hand' at so delicate and complex a work. The time has now come for an answer to the inquiry, has the experiment of School Boards justified the cost and labour entailed? So far as Manchester is concerned the answer must be in the affirmative. The immediate effect of four years' working of the Act has been to reduce the mass of juvenile ignorance in the city by 14,000 children; to teach many members of the Board the duty of laying aside all party strife for the sake of progress; to awaken among all classes a new interest in education; and to demonstrate the value of the compulsory principle. Never were educational prospects in Manchester so bright as now. The party of progress is in the ascendant, and in no long time the necessary new schools will spring up, and the duties of parents be more strictly enforced.

Finally, do such results justify the money expended? The total expenditure up to September 1873, being three years' working, amounted to 18,644*l.* 18*s.* 4*d.* This averages rather less than a penny in the pound per annum, while nearly two-thirds of the whole has been devoted to direct school and educational work, the general departmental expenses representing the remaining third. The accounts for the present year are not completed, but it is estimated that the ratepayers will be called on during 1874 to contribute to the extent of 1¼*d.* in the pound. This increase is mainly due to the erection of new Board schools. Timid ratepayers, however, need not take fright. The Public Works Loan Commissioners offer money in loan at 3½*d.* per cent. repayable within fifty years, by means of which the Manchester Board could buy land and build new schools for 10,000 scholars, fitted up with every modern

appliance, by means of a rate only a halfpenny in the pound. It may also be recorded, that while in London new Board schools have cost in land and buildings 9*l.* 13*s.* 4*d.* per child, and in Bradford 25*l.* 12*s.* 6*d.*, the average cost in Manchester is 8*l.* per child for land and buildings.

These facts may be received as an assurance that School Boards thoughout the country may grant the most liberal educational supplies without imposing very heavy burdens on the ratepayers of the present generation, and may thus hand down to their successors the greatest of all social blessings—an educated population.

DISCUSSION.

Mr. Cooke Taylor (Preston), Inspector of Factories, had observed with some concern that the three papers, while admirable in themselves, wandered somewhat from the point under consideration, dealing merely with the Education Act. He proposed to confine himself to the subject submitted for discussion, and to endeavour to show how, by the operation of all the Acts mentioned, the desired result might be obtained. It was not for him at this stage to defend the half-time system of education. Indeed he believed no more admirable system had ever been devised, and that no greater results had been more reasonably secured by any other method. But, unfortunately, the ability with which the education clauses and Factory Acts were drawn was entirely absent from the Workshops Act, which was intended to occupy the space left vacant by the former. The Workshops Act introduced an entirely new system amongst half-timers; the Agricultural Children's Act became another and entirely different scheme; while the Coal Mines and the Metalliferous Mines Acts introduced no system whatever. Consequently, a child well provided for under the Factory Acts would be worse off under the Workshops Act, and wholly without provision under the Mines Acts. The first thing to be done in order to make these Acts of the greatest utility would be to assimilate their education clauses. The next step would be to bring about a combination of School Boards and inspectors of factories and workshops. At present no such combination existed, and although he was constantly in communication with School Boards there was no compulsion to ensure joint action. A further step would be the compulsory establishment of School Boards in every town. It was very extraordinary that in Lancashire, for instance, Preston was entirely without a School Board, while Wigan, Bolton, Blackburn, and other towns in the neighbourhood had School Boards; so that a Preston child would have a poorer education than a child in Blackburn or elsewhere. He could not agree with those who proposed to abolish the half-time plan altogether until it had been fairly tried, and the Education Act had been made to work harmoniously with it. If it should then be proved that indirect compulsion did not produce a national system of education let it be abandoned for direct compulsion, but not

until then. He could not quite accept the theory that all half-timers should be required to attend Board schools. In a great many cases factories were situated a long way from Board schools, and it was usual in such circumstances for the proprietors of the factories to establish schools of their own, and therefore a compulsory law that half-timers should attend none but Board schools would be a most unfortunate regulation. All the factory schools came under the notice of factory inspectors, who had power to remove any child from a school where the teaching or educational appliances were insufficient.

Mrs. Louisa Lowe (London), who had had a practical knowledge for thirty-five years of the conduct of the children of poor parents in agricultural schools, was convinced that the beneficial effect of these Acts would be enormously increased if the framers of them were to consider the wishes of the poor and their views on education. They might be supposed to know best their own needs, and she believed they were often right in thinking that in agricultural districts education was made far too much a synonym for book learning. In her own parish there had been great difficulty in getting anything like a fair proportion of children to attend the national school, which was under Government inspectorship. The parents preferred the day schools, because they thought the education there given better adapted to fit the children for their future career in life. Not long ago Viscount Sidmouth established an outlying school in one of the most scattered districts of Devonshire. It was not under inspection, or under a certificated mistress; yet all the farmers of the neighbourhood preferred to send their daughters to it because they were taught reading, writing, and arithmetic, such geography as could be learned by constantly seeing a large map of England on the wall, and were for the rest of the time occupied in knitting and sewing. These parents considered that the immense variety of subjects taught in other schools distracted the attention of girls, and made them take less interest in milking, housework, and the employments which they required to follow to become good servants or good wives for labouring men. In one of their earlier reports Her Majesty's Inspectors of Schools drew attention to the circumstance that girls in schools were always practically half-timers as regarded books, as the afternoon was devoted to needlework; yet they made more progress than the boys—two and a half or three hours' study being better than five or six. If industrial occupations were found for the boys parents would be less unwilling to send them to school, and when the boys were set to carpentry, or word of that kind, in the afternoon, the parents would reap the benefit in the general usefulness of the boys about the house. Having brought up a large family, she was convinced that they would never find in literary education any real rival to the attractions of public-houses, music halls, and vicious amusements. When boys left their schools or work they did not find their exercise in books, but in manual employments. By combining industrial with literary training schools would be made more attractive, and the children themselves would become the most earnest advocates with their parents for regular attendance.

Mr. William Kidston (Glasgow) said he was connected with two School Boards, and had a good deal of acquaintance with the habits of the poor,

having been for thirty years a Sabbath school teacher. His experience taught him that the Workshops and Factory Acts and the Education Act would require considerable revision in order to make them capable of being worked together. It would also be necessary to have separate rooms in connection with schools, to which very young children could be brought to play during the time in which their elder brothers and sisters were being taught in school. They must deal with the matter practically, and if, by providing for very young children, they could get more of the older children to attend school, they must be content to carry out such an arrangement as one mode of extending education. Every facility must be given to the scholars, but the burden of proof that a child was above thirteen must fall upon the parents. At one of their meetings ninety-two defaulting parents were summoned before the Board, and the members explained to these people the value of education, showing them that their children would get better situations if they were educated. They also urged the parents in a kind manner to comply with the law, and the result was that out of 9,000 children in one district 5,000 were at once sent to school. When parents said they could not afford to send their children to school they were told that they must satisfy the Poor-law Guardians that theirs was a real case of necessity. It was difficult to give charity without encouraging indolence and vice, and such matters could be better disposed of by the Poor-law Boards than by the School Boards. The hard and fast regulation in the code requiring children under all circumstances to attend four hours consecutively for secular education was unworkable, and must be modified; for it would be utterly destructive of infant schools, and even children of nine and ten could hardly be kept in school so long a time. In places like Glasgow the School Board schools ought to be supplemented with a certain number of industrial schools in regard to which he hoped the Boards would have power to assess for maintenance as well as building.

The Rev. WILLIAM MITCHELL (Glasgow) remarked that there were two kinds of difficulties in the way of getting children to school. Some belonged to the children themselves, but others had been thrown in their way, and educational reformers ought to look first at those which they had most control over. In a portion of the community great dissatisfaction prevailed amongst parents at having to pay both fees and rates. Those who were determined that every child should receive a good education ought not to be satisfied until they had obtained perfectly free schools, so that when people had paid their rates their children could go to school without any additional burdens being cast upon them. Another impediment arose from the objection which many poor people, who were as respectable as others possessed of more means, had to the degradation of pauperising themselves to receive fees from the parish. As for those who had degraded themselves by drunkenness and selfishness, it would be better to send them to prison, because the policeman and jailor would be better teachers of them than Poor-law Guardians. He was of opinion that the School Boards ought to have full power to control all the educational concerns in their districts. It had been well suggested that the arab children should be cleaned and

fed rather than crammed with catechisms, which even intelligent and well-instructed children were confused by. Everything of that kind hindered the working of these Acts. It was foolish to compel people to pay fees for the teaching of that which they believed to be wrong. As a nation they ought to cast these obstructions aside, and show that they were more interested in the intelligence and morality of the country than in mere theological forms. Mrs. Lowe had referred to the agricultural districts, but every other speaker had spoken as if Great Britain was one great city, instead of being divided into manufacturing, maritime, and agricultural districts. In places like Glasgow and in factory towns, which were easily mapped out into districts, the children could be more easily reached than in agricultural districts, and some other method of bringing under instruction children in the country must be adopted. It might be well to allow them to attend school and to engage in work on alternate days.

Mr. William Ball (York) held that School Boards ought to have more discretionary power in enforcing the compulsory clauses, and agreed in the opinion that the education clauses of the various Acts under discussion must be assimilated. He deprecated the exclusion of the Bible from school teaching.

Mr. H. Long (Glasgow) urged the necessity for caution, lest in educating the children they should pauperise the parents. School Boards did not stand so much in the place of the parent as to be called upon to feed and clothe their children, and if they did so they would encourage slothfulness by invading the duties of maternity in the most objectionable manner. There was reason to hope that with the spread of education parents of the next generation would take better care of their children. Industrial schools would not then be required, and he was opposed to burdening the rates for the support of institutions for which, in the future, there would be no need.

The Rev. William Leggett (Glasgow) said that it was a mistake to object to the half-time system, which he had known to produce most beneficial effects. The operation of the educational clauses of the Factory Acts, however, had been far from satisfactory, especially in Scotland. The establishment of School Boards was an improvement, and the half-time system might be made very useful if children were brought to school in relays, one set in the morning and one in the afternoon. It was agreeable to children to be employed for a portion of their time in industrial occupations, and at thirteen and fourteen they became anxious to earn wages and lighten home burdens. In Glasgow the half-time system had not been fairly tried, but one school had been in active operation for fifteen years in connection with the thread mills in the eastern district. There they had two relays of children, the first numbering 72 and the second 75, making 147 altogether. The average yearly attendance was 140. One condition of their being permitted to work was regular attendance at school. He believed there would be no difficulty in School Boards establishing schools of that kind amongst industrial populations. At present too great a tendency was shown to pay exclusive attention to book teaching. A joiner's shop stimulated the intelligence of children far more than

many ordinary schools. It would, however, be a mistake for School Boards to establish industrial schools, but industry could not be as effectually organised in them as in workshops. Let every School Board be a department wholly given up to half-timers, and let employers of labour come to those schools and obtain the services of two boys, one to work in the forenoon and the other to take his place in the afternoon. In this manner the half-time Act would be efficiently worked.

Mr. KIDSTON explained that he did not wish School Boards to reject the half-time system, but held that to amalgamate half-time with the ordinary schools would be injurious and impracticable.

Mr. G. J. HOLYOAKE (London) believed the English brain capable of containing more than Mrs. Lowe proposed to put into it, and had been struck at the painful higgling developed during the discussion about giving free education. It was the interest of the State that the people of England should be educated, and to see, if parents neglected their duty or could not discharge it, that such education was given. So long as rates were levied for schools, why should not education be made absolutely free? All the endowments of education had been seized upon by the middle class, who were as much degraded by getting education partly at the public expense as parents or children could be by the free education he proposed. This cry about degradation of the parents was the most pitiful one that could be raised. Some time ago he was at Amsterdam, and had occasion to go down the Zuyder Zee to see a friend who had the management of large works. He saw in the midst of the waters a school for the children of the workmen, and ascertained that the workmen would not come to work unless education was provided for their children. When trades' unions were wiser, would they not exact education as a condition of anybody working anywhere? As to secular education it meant separateness in the mode of tuition; it did not mean prohibition of the Bible or religious teaching. Recently a lady in London came to him and said, 'I have opened a secular school, and the parents say they want religious instruction.' He said, 'Very well; tell them they can have it, but say religion is an extra, because you are called upon to do the duty of the local clergyman. This is his business. You ought to engage some poor, but honest, curate, pay him for doing it, and charge it in the bill.' This mixed education made muddle-minded Christians and muddle-minded statesmen.

Mrs. AMELIA LEWIS (London) insisted on the necessity of training and educating children, whether the parents were able to pay or not. At the Bath Street Schools she had seen 300 poor little creatures brought in from the streets, and at first there was the greatest difficulty in getting them to comprehend anything. If children were allowed to run about the streets in that manner, they had the greatest difficulty in paying attention to instruction; they could not understand the laws of society and grew up criminals. As to feeding and washing them, she had found that persons interested in the children had a marvellous influence over them. On one occasion she took charge in Suffolk of lads of from twelve to seventeen whom no one could manage. After she had instructed them for six weeks, they actually came to her one Sunday evening with their slates and copy-books to learn what were

their lessons for the week. In the City of London she tried another boys' class, and was so successful that she did not believe in any lower humanity at all. It was said, 'Do not pauperise the parents;' but their duty to their children was higher than their duty to themselves, and they must take relief from the parish rather than allow their children to go without education, which was an absolute necessity.

Mr. ROWLAND HAMILTON (London) said everyone who had attended the meeting of that department must have been impressed with the extent of the question it had undertaken to discuss. It had been said on the previous day that there would be nothing to spare out of the revenues of the universities. When they came to consider a truly national question, they would find that it would require an amount of expenditure spread over the whole country of which even the endowments of the universities and all others together would form but a very small portion. For this reason he had listened with special interest to the observations upon pauperism. Although he could not go entirely with Mr. Holyoake, yet a scheme of free schools, to which every child would have the right of access, would involve no idea of pauperism. The idea of pauperism was engendered by the difference made between one child and another. And this brought him to another difficulty, which he hoped would before long disappear, but which at present was very serious. He could not but think that a great many of these exceptional cases of worthy and deserving people, who were unable to pay the school fee, must be left to their neighbours and friends, because a remedy could not be applied by law without giving permanence to the very evil they desired to remove. As to technical instruction, he could not but regard teaching a child a trade as a subsidiary and separate branch of the great educational system, but the use of certain handicrafts would be valuable in cultivating the faculty of correct observation, which, at present, was too much neglected. Many of the difficulties of the half-time system might be avoided by some modification of the system of apprenticeship. The attempts to legislate upon this subject made by Lord Brougham, Lord Russell, and others, and the partial success of the Factory Acts, showed how great were the difficulties to be overcome; and it might be said that the measure of 1870, like the constitution which Solon gave to Athens, was the best which the country could support at the time. With all its defects, it was an Act under which all who wished to do real work would receive some support from the Government. But it must not be accepted as final, and if the Association could assist those who were seeking improvemement by bringing practical experience to bear upon the Education Department, one step would be taken towards obtaining a better enactment.

Mr. E. L. O'MALLEY (London) desired to say a word or two from the point of view of selfishness, prejudice, and ignorance. It appeared to him that the interests of the British ratepayers had been ignored in this discussion. As a ratepayer, he regarded with terror the extension of a system which, as proved in the case of Glasgow, necessitated so much expenditure. The notion that schools should be made free was founded upon an opinion of the duty of the State which he hoped would never

become popular. It was not the duty of the State to educate its young, but to see that those who by nature were responsible for the welfare of the young should educate them. On the part of those who did not favour communism, he must protest against another argument put forward by Mr. Holyoake. Because there were endowments for the rich, it was argued that the ratepayers should be called upon to pay for the education of the poor. He disputed the analogy which Mr. Holyoake had attempted to draw between the endowments provided by those interested in education and the funds which might be forced by State ordinance from the nation. He admitted that when the views of those who agreed with Mr. Holyoake had been generally accepted, and endowments intended for private purposes had been treated as national possession, there might be some force in the argument; but that only made him hope that the day when that could be done might be far distant. The right to individual liberty had been overlooked. He did not say that the conduct of the Glasgow School Board had been tyrannical or oppressive, but it was dangerous to argue from particulars to generals, and what might be admirable under good management in that city would be a terrible experiment if applied throughout the country. He must protest against the tremendous paraphernalia of criminal procedure which one of the papers recommended should attach to the operations of School Boards. Full justice had not been done to what had been contemptuously called 'private adventures;' and he believed that there was a good deal of recklessness in the spirit of those who rode the hobby of School Boards. No scheme of education could ever succeed which did not commend itself to the hearts, consciences, and sympathies of the people.

Mr. Holyoake stated that when he spoke of the middle or the upper class having plundered endowments meant for other people he did not propose that the people should imitate that example. He must repudiate the suggestion that he was a Communist in that sense.

The Rev. Dr. Rigg (London) considered the School Board system of compulsion in some form so much of a necessity that all the schools in the kingdom, whether under School Board inspection or not, ought to be under some sort of responsible supervision and inspection. He heartily joined in the protest which had been made on behalf of individual liberty, and trusted that no universal abstract system of mathematical exactitude, rejecting all local considerations, would ever be applied. He had hoped that one striking weakness of the half-time system would have been pointed out—it was the absence of any provision for children being sent to school except when they were at work as half-timers. A boy might be as ignorant as possible before commencing work, and in the factory districts too many parents, knowing that they would be obliged to send their children when they went to work, were in the habit of not sending them to school at all until that time arrived. This was a fatal objection to the system, unless a remedy could be provided. No doubt the education clauses of these Acts ought to be assimilated as regarded towns, but the arrangements suitable to manufacturing districts were not quite applicable to agricultural dis-

tricts. But it was most important that no child should be allowed to go to work until it had passed a certain standard of examination. Unless a regulation of this kind was made direct compulsion must fail. It would have been better had they been able to rely upon indirect compulsion, but dire necessity had compelled the country to seek Government aid, and to resort to direct compulsion. The great antagonist to education was, after all, the labour market. It was not generally known that the most illiterate parts of England were the manufacturing districts. There was no better test than the number of men and women who on their marriage signed the register with a mark, because they could not write their names. Tested in this way, the iron-working and coal-mining districts were found to be the most illiterate. For instance, in Staffordshire 36 per cent. of the men and 44·1 per cent. of the women signed crosses instead of their names; and in Monmouthshire, 36·7 men and 44·4 women did the same. In Lancashire the figures were—men 20·5, and women 40 per cent. of all classes; most of these people had been to half-time schools. Of agricultural counties the following results were given:—Westmoreland, 11·2 men and 14·7 women; Rutland, 14·5 men and 10·9 women; Hampshire, 16·3 men and 14·6 women; Dorsetshire, 21·2 men and 18·6 women. Take again Berkshire, with scarcely any manufactures; Buckinghamshire, with very little; and Bedfordshire, with straw platting and other manufactures. In Berkshire 21·2 per cent. of men and 15·1 of the women were unable to sign their names; in Buckinghamshire, 25·2 men and 24·2 women; and in Bedfordshire 32·5 men and 35·6 women. If they could provide that no one should go to work until he had passed a certain standard of learning, that he should be kept at half-time when first he began work, and that he should never go to full time until he had passed a further standard, much would be done to meet the necessities of the case.

Mr. James McClelland (London) (who had taken the chair in the absence of Lord Napier and Ettrick) expressed surprise that industrial schools could not be established in Scotland as in England. It had been stated that twenty-one parents had been fined by the sheriff twenty-one guineas. If they did not send these children to school, were similar fines to the same amount to be imposed? This was a great difficulty, for he feared there was a class which could not be dealt with either by fine or imprisonment. The half-time system would not be satisfactory until there was one uniform regulation for the whole country. He doubted the efficacy of evening schools, because children who had been at work all day were apt to fall asleep over their lessons. In order to avoid infection, it was highly desirable that every child should be clean, and that a bath should be attached to every school. To remove the difficulty in regard to fining poor parents, he would suggest a school organisation, similar to the charity organisation in London, by which benevolent persons might seek out defaulters and persuade them to send their children to school. Rather than these people should be placed amongst disreputable associations in jail, it would be better that the fees should be paid.

The Rev. William Mitchell, replying to the objection raised on

behalf of the ratepayers, said the School Board were not acting as legislators, but as administrators of the Education Act, and in Glasgow no expense which that measure did not authorise had been incurred. The rate in Glasgow of threepence in the pound was the smallest in the country. They could not be charged with being too rigid with defaulters, because they had no discretion as to summoning defaulters before the Board. The spirit of the half-time Act had been ignored, but under the new Act it would be impossible to evade giving proper education to children. No child under ten years of age could be employed half-time, and consequently they had the years from five to ten free for carrying out the powers of the Act.

The Rev. J. PAGE HOPPS (Glasgow) explained that he did not propose to abolish the half-time system, but regarded it as a painful necessity, and thought they should seek to make that system and night schools unnecessary. As to religious difficulty, of which some people were so afraid, he ventured to predict that in five years' time the conscience and heart of the country would approve of the secular education. It was a burning shame that those who contended for that system should be attacked as though they were opposed to religious education. He was earnestly in favour of religious instruction, but believed that it ought to be given by the best men, and that a distinction should be drawn between things which differed.

Mr. T. F. MOSS (Sheffield) stated that he had not proposed that private adventure schools should be swept out of existence, but merely insisted that those who undertook to teach should prove their competency for the task. It was an injury to society to allow children to spend the best years of their lives in schools which did not supply efficient education. With regard to washing and feeding children, he would give his experience of a school in the lowest part of Sheffield, which was opened for the accommodation of 1,000 children. During the first week they came dirty, ragged, and unkempt, but one of their best teachers, a Scotchman, explained to the parents that the children must be sent clean and tidy. Afterwards, those who came dirty were sent home again. The consequence was that the children soon came neat and clean, and the school now presented a most pleasing sight. It was not difficult to teach children cleanliness, and the moral influence of their school training extended to the parents.

The History, Principles, and Progress of Education in Scotland on the working of the Scotch Education Act. By the Rev. JAMES TAYLOR, D.D.

THERE is abundant evidence that at a very early period schools existed in Scotland chiefly in connection with the religious houses. As Principal Lee remarks, we cannot but think kindly of the men who founded and supported the country schools in which Buchanan and Knox were educated forty years before the Reformation; but while we give these

men the honour that it would be unjust to withhold from them, we must claim for the great Scottish Reformer and his colleagues and successors the credit of having been the instruments in the hand of Providence of effecting the establishment of the parochial schools for the education of the poor as well as of the richer members of the community. It was proposed by John Knox that a school should be established in every parish, a grammar-school, or college, as it was called, in every town, and a university in every city. The authors of the 'First Book of Discipline' judged it a matter of necessity that 'every parish should have one schoolmaster appointed —such a one at least as might be able to teach grammar and the Latin tongue, if the town were of any reputation.'

In 1616 the Privy Council empowered the bishops, in conjunction with the heritors, to establish a school in every parish in their respective dioceses, and to assess the lands for that purpose, for the advancement of true religion, and the training of children 'in civility, godliness, knowledge, and learning.' This Act of the Privy Council in 1616 was confirmed by the Parliament in 1633; and under its authority schools were instituted in the more cultivated districts of the country. Five years later, the General Assembly of the Church of Scotland gave directions for 'the settling of schools in every parish, and providing entertainment for men able for the charge of teaching youth.' A representation was made to His Majesty that 'the means hitherto appointed for schools of all sorts have both been little and ill-paid,' and in 1642 presbyteries were ordained to see 'that every parish should have a school where children are to be bred in reading, writing, and grounds of religion.'

The dissensions which soon after broke out in Scotland unfortunately prevented the nation from reaping the full fruits of these wise enactments, but the registers of the Ecclesiastical Courts prove that schools were generally established throughout the Lowlands of Scotland, and that in these districts education was widely diffused. After the Revolution had established peace and order in the kingdom, an Act was passed in 1696 which declared that a school should be instituted and a schoolmaster appointed in every parish, and salaries provided for the teachers. The maximum salary was fixed at 200 marks (11*l.* 2*s.* 2*d.*), and the minimum at 100 marks. The right of appointing the teachers and superintending the school was vested in the heritors and the minister of the parish.

This famous Act laid the foundation of Scotland's proudest distinction, and has proved one main source of her subsequent prosperity.

'Before one generation had passed away,' says Lord Macaulay, 'it began to be evident that the common people of Scotland were superior in intelligence to the common people of any other country in Europe. To whatever land the Scotchman might travel, to whatever calling he might betake himself, in America or in India, in trade or in war, the advantage which he derived from his early training raised him above his competitors. If he was taken into a warehouse as a porter, he soon became foreman. If he enlisted in the army, he soon became sergeant. Scotland, meanwhile, in spite of the barrenness of her soil and the severity of her climate, made such progress in agriculture, in manufactures, in commerce, in letters, in science, in all that constitutes civilisation, as the Old World had never seen equalled, and as even the New World has scarcely seen surpassed.'

For more than a century after the passing of the law of 1696 the Scottish parochial schools were wholly overlooked and neglected by the Legislature. The emoluments of the schoolmasters remained stationary, while those of every other profession and trade increased. In consequence, the social status, the acquirements, and influence of the teachers were seriously deteriorated. Their depressed condition at length attracted the attention of the Legislature; and in 1803 an Act was passed which raised the maximum salary to 22*l.* 4*s.* 3*d.*, and the minimum to 16*l.* 13*s.* 4*d.*, exclusive of fees, and declared that a dwelling-house of *not more* than two rooms should be provided for each schoolmaster. The Act further provided that the salaries of the teachers should be revised every twenty-four years, the average price of grain during the preceding twenty-five regulating the salary during the succeeding twenty-five. At the first revision, in 1828, a considerable addition was made to the salaries of the parochial teachers; the maximum was raised to 34*l.* 4*s.* 4*d.*, the minimum to 25*l.* 13*s.* 3*d.* But at the second revision, in 1833, these sums were reduced nearly one-third.

Meanwhile, the country had become awake to the fact that the time-honoured parochial system, invaluable as it had been in days past, was no longer adequate to meet the altered conditions of society, and to supply the vastly-increased educational want of this community, even when supplemented by the Free Church Education Scheme, and by hundreds of adventure schools. In consequence, strenuous efforts to adapt our educational system to the present state of the country were made, first by private members of Parliament, like Lord Melgund—now Earl of Minto—and the late Mr.

Alexander Murray Dunlop, and then by successive liberal governments represented by Lord Moncreiff, to whom Scotland owes a deep debt of gratitude for his unwearied labours in this good cause. Not less than ten education bills were introduced into Parliament between 1849 and 1872. The principles of all these bills were the same—central and local supervision, inspection, and compulsory rating—and all of them, with the exception of the bill of 1861, which abolished the religious tests imposed on the teachers and increased their scanty emoluments, were shipwrecked on the rock of ecclesiastical jealousy and contention. But the light thrown by the Royal Commission of 1866 on the real state of education in Scotland, its insufficiency in many even of the rural districts, its inefficiency in many more; the discovery that while in some counties the proportion of scholars to the population was 1 to 5, in others only 1 in 14, and that in individual parishes it varied from 1 in 4 to 1 in 30; and the appalling fact that in all our large towns the number of totally uneducated children might be counted by thousands, in one at least by tens of thousands, and that there were in Scotland not less than 92,900 children who attended no school, and were growing up in total ignorance of their duty alike to God and to man, at length constrained the members of the Legislature on both sides of the House to unite in passing the bill which the late Lord Advocate Young introduced into Parliament in 1872, and which became law at the close of that session.

There are two great principles on which the Education (Scotland) Act is founded—viz., that efficient and suitable education must be provided for every child of school age in the country, and that every child is bound to take advantage of the education thus provided. The principle embodied in the compulsory clauses of the Education Act is not new in Scotland. As early as the year 1494, it was enacted by the Estates that throughout the realm all barons and freeholders 'that are of substance should put their eldest sons and heirs to the schools free, until they be six or seven years of age, and to remain at the grammar schools until they be competently founded and have perfect Latin; and thereafter to remain three years at the schools of art and jure (law), so that they have knowledge and understanding of the laws . . . and what baron or freeholder of substance that holds not his son at the schools, having no lawful excuse, he shall pay to the King the sum of twenty pounds.' At a later period, the Church Courts appear to have specially charged themselves with the duty of compelling parents, of whatever rank, to bring up their children 'in

earning and virtue.' Numerous entries are scattered throughout the minutes of the Kirk Sessions which show the great anxiety of the ministers and elders that the people should send their children universally to school, that 'they may all learn at least to read.' And it is enacted, that the parents who neglect to do so shall pay the same fees as if their children were sent to school. Take as an example of such enactments the following extract from the minutes of the Kirk Session of Anstruther in 1595:—'The Session thinks meet that all the youth in the town shall be caused to come to the school to be teached, and that sic as are puir shall be furnished upon the common expences . . . . And for sic as are able to susteen their bairns at the school, and do their dewtie to the teacher for them, they shall be commandet to put them to the school, that they may be brought up in the fear of God and virtue, whilk if they refuse to do they shall be called before the Session and admonisht of their dewtie. If after admonition they mind not, then farther order shall be taken with them, and the magistrates and council be desired to take fra them the quarter payment for their child whether they put their bairns to the school or not.' These stringent measures were attended with the most beneficial effects, and were completely successful in attaining the end in view. We are informed by Kirkton that in 1560 'every village had a school, every family almost had a Bible, yea, in most of the country all the children of age could read the Scriptures.' And down to a very recent period in the rural parishes throughout the Lowland counties scarcely a single individual of mature age could be found who was unable to read. The altered state of matters in the large towns, and in the mining and manufacturing districts of the country, to a great extent brought about by the influx of many thousands of the Irish, has rendered absolutely necessary the enactment of stringent compulsory provisions to secure the education of the youth of the country. On this point all parties, political and ecclesiastical, are at one, for experience has demonstrated that while sober and decent parents, no matter how poor they might be, are willing to make almost any sacrifice to obtain for their children the blessings of education, the ignorant and careless, and especially dissipated parents, could not be induced by any amount of moral reason to send their children to school, and that greed of the pence which their wretched offspring might pick up by running messages, or by begging or stealing, was a sufficient motive to induce them to refuse education, even when offered gratuitously. The Act of 1872 deals with such parents in a most stringent and effectual manner by inflicting on them fines and imprisonment if they

neglect to send their children to school. It also holds the employers of untaught children of school age responsible for their education, and to remove any valid excuse for neglect of this duty, in the spirit of the old ecclesiastical legislation, it makes provision for the payment of the school fees of those children whose parents are unable through poverty to meet the expense of their education.

The practical effect of these compulsory enactments has fully indicated the sagacity of those by whom they were propounded. It is, of course, mainly in the large towns and in the mining and manufacturing districts that compulsory measures are required to secure regularity of attendance, and it is in such places that the effect of these proceedings has been most conspicuous. When the School Board of Glasgow entered upon their duties they found, on a careful investigation, that there were in four districts alone of the city upwards of 8,137 children of school age who were not in attendance at any school, and whose absence was without excuse. In the Calton district, after deducting removals and exemptions, there remained 1,243 defaulters. Of these no fewer than 1,024 have been sent to school in consequence of remonstrance and warning by the officers of the Board, 92 after a formal notice had been served; 93 after the parents had been summoned before the Board; while in the case of only six parents, having altogether ten children, was it necessary to have recourse to legal proceedings. In the High Church district, deducting removals and exemptions, there were 2,178 defaulters, of whom 1,358 have been sent to school through the effect of visiting, remonstrance, and warning, 489 after formal notice had been served, 121 after meeting with the School Board, and 9 after prosecution. Similar results have attended the proceedings of the Board in the other districts of the city.

In Edinburgh there were in October 1873, 5,983 children between five and thirteen returned as not at school, from whatever cause. Of these, as the result of the compulsory officers' work down to May last (seven months), 4,273 have been sent to school. Deducting 69 incurables, there remain only 604 defaulters, more than half of whom are under seven years of age; 171 were absent through temporary sickness, so that there were only 433 children of school age six months ago absent without valid excuse.

In an elaborate and valuable report furnished to me by the Clerk of the School Board of Govan, it is stated that in May 1873 the number of children on the roll in all the schools in the parish amounted to 7,198. In May 1874,

the number was 9,438, an increase in one year of 2,240. The average attendance in all the schools was in May 1873, 6,072; in May 1874, 7,843; results due mainly, if not entirely, to the active efforts of the School Board. When this Board entered on office there were in the parish 2,640 children of school age not under instruction. In the course of a year, through the influence of visits, the issuing of notices and of summonses to appear before the Board, without resorting to prosecution, 1,989 of these neglected children had been sent to school, and the number of defaulters reduced to less than a fourth. Even this gratifying result does not satisfy the aims of this zealous and energetic Board. Within the last two months they have served notices on 384 parents, representing 510 children, of whom 273 have in consequence been sent to school, leaving only 237 to be still dealt with instead of 2,640 who were defaulters only seventeen months ago; and of these the greater part plead as an apology want of clothing. The contrast between 5,983 defaulters in October 1873, and 433 in May 1874, affords conclusive evidence that the operation of the compulsory clauses of the Education Act has been most satisfactory. Similar results have been reported by the School Boards of the other large towns. The influence of these provisions in securing regularity of attendance throughout the rural districts of the country has been at least equally beneficial. In most instances the mere intimation that the compulsory powers entrusted to the School Board were about to be exercised has been sufficient to gain the end, and in only a very few instances has it been found necessary to prosecute the careless and negligent parents before the Sheriff of the County.

The full effect of the compulsory clauses of the Education Act, however, cannot be seen until adequate school accommodation has been everywhere provided, and the statistics prepared by the School Boards throughout the country show that there is great need in the rural districts as well as in the towns of additional school accommodation.

It was stated in the Report of the Board of Education presented to Parliament four months ago that in not a few of the rural parishes the parochial school buildings are inadequate, badly ventilated and drained, and unprovided with a playground or with necessary conveniences, and that there are even a number of parishes in which there is no school-house or teacher's dwelling. In 121 landward parishes taken at random, containing 67,635 children of school age, there was good school accommodation for only 38,407 scholars. In ten burghs

having 37,630 children of school age there was good accommodation for only 28,250 scholars. In Glasgow, with 87,29[illegible] children of the school age, there was suitable provision for not more than 54,270 scholars, making together a deficiency of proper accommodation for 71,680 scholars, in a gross population of 1,083,560. Even taking into account the indifferent and bad accommodation in these parishes and burghs, there is still a deficiency of provision for the instruction of 54,671 scholars.

The additional facts which have been brought to light since the publication of the report have only seemed to confirm the opinions then and therein expressed.

In 88 parishes, each with a population under 1,000, whose aggregate population is 62,631, the number of children of school age (between five and thirteen) is 12,209; on the roll, 10,032. The total existing accommodation is for 9,871, of which that for 6,882 is good, and that for 2,971 indifferent or bad.

In 113 parishes, with a population between 1,000 and 2,000 each, whose aggregate population is 160,228, the number of children of school age is 30,446; on the roll, 25,732. The total accommodation is for 24,898, of which that for 16,507 is good, and that for 8,391 indifferent or bad.

In 117 parishes, with a population between 2,000 and 5,000 each, whose aggregate population is 329,847, the number of children of school age is 61,991; on the roll, 53,386. The total accommodation is for 48,460, of which that for 34,151 is good, and that for 14,309 indifferent or bad.

In 30 parishes, with a population between 5,000 and 10,000 each, whose aggregate population is 197,163, the number of children of school age is 38,718; on the roll, 32,713. The total accommodation is for 27,831, of which that for 19,779 is good, and that for 8,052 indifferent or bad.

In five parishes, each having a population above 10,000, whose aggregate population is 128,791, the number of children of school age is 22,150; on the roll, 15,490. The total accommodation is for 14,103, of which that for 12,548 is good, and that for 1,555 indifferent or bad.

In 14 burghs, each having a population below 10,000, whose aggregate population is 89,053, the number of children of school age is 16,353; on the roll, 16,284. The total accommodation is for 15,748, of which that for 13,361 is good, and that for 2,387 indifferent or bad.

In 10 burghs, each with a population between 10,000 and 20,000, whose aggregate population is 141,239, the number of

children of school age is 23,925 ; on the roll, 21,908. The total accommodation is for 20,308, of which that for 15,845 is good, and that for 4,503 indifferent or bad.

In the burghs of Aberdeen, Dundee, Greenock, Paisley, Kilmarnock, Edinburgh, Leith, seven in number, each of which has a population above 20,000, and their aggregate population amounts to 548,546, the number of children of school age is 95,595 ; on the roll, 83,933. The total available school accommodation is for 77,956, of which that for 71,900 is good, and that for 6,056 indifferent or bad.

We thus see that in 353 landward parishes, with an aggregate population of 878,660 and 165,534 children of school age, there is good school accommodation for only 89,867 scholars, though a large proportion of the whole number were under instruction. In 31 burghs, with an aggregate population of 778,838, and 135,873 children of school age, there is good school accommodation for only 101,106 scholars. In Glasgow, with 87,924 children of school age, there is good school accommodation for only 46,749 scholars. There is an aggregate deficiency in 353 parishes of good accommodation for 75,667 pupils; in 32 burghs (including Glasgow), for 75,942 ; making together a deficiency of good accommodation for 151,609 scholars, in a gross population of 2,171,163. Even taking into account the indifferent and bad accommodation, which School Boards have in almost every case resolved to supersede, there is still a deficiency in the above-mentioned 353 parishes of provision for 40,371.

These details may serve to show the onerous and responsible character of the work which the School Boards have to perform, and it is only bare justice to them to state that with a few exceptions they have set themselves to the discharge of their duties with praiseworthy activity and zeal.

The School Board of Glasgow, who have by far the hardest task to perform and are carrying it through with characteristic energy, report that they have ascertained by a careful census that there is in the burgh a deficiency of good school accommodation for 30,000 children. They propose to build as speedily as possible thirty schools, to accommodate 22,000 pupils, at an expense of at least a quarter of a million. They have already received the sanction of the Board of Education to erect fifteen new schools, which will accommodate 12,285 scholars, and will cost 140,000*l.*

The Edinburgh School Board have resolved to build seven new schools for 4,200 children, at an expense of 70,000*l.*

The School Board of Govan propose to erect five schools

for 4,053 scholars, besides the enlargement of existing buildings, at a total cost of 43,000*l.*

Paisley School Board have received the sanction of the Board of Education to their 'determination' to erect five new schools to accommodate 3,750 pupils and to enlarge an existing school, at an expense of 30,000*l.*, exclusive of the generous donation of 4,000*l.* from the Chairman of the Board to provide additional class-rooms, not imperatively required by the Code.

The School Board of Leith have resolved to build six new schools to accommodate 2,800 scholars, at a cost of 30,000*l.*

Kirkaldy is to expend 10,000*l.* in the erection of two new schools for 1,000 pupils; Airdrie, 8,850*l.* on two schools, for 950 scholars; Galashiels and Kilsyth, 4,000*l.* each in the erection of two schools, to contain 470 and 600 pupils respectively; Kirkintulloch, 3,000*l.* on a school for 500 children. In all, these ten School Boards have resolved to erect sixty new schools, to accommodate 40,325 scholars, at an expense of 382,850*l.*, nearly 9*l.* 10*s.* per scholar.

I may give an example or two of the proposals made by the School Boards of mining, agricultural, pastoral, and Highland parishes. The Cambusnethan Board, though they enjoy the benefit of several model schools erected and supported by the Coltness Iron Company, of which their liberal and energetic Chairman, Mr. Hunter, is the managing partner, have yet found it necessary to build three new schools for 1,320 scholars and to enlarge a fourth, at an expense in all of 16,000*l.* St. Ninian's Board propose to erect six schools, to cost 8,000*l.* and to contain 940 scholars. Bo'ness is to expend 3,500*l.* in building three schools for 494 children, and enlarging others. Kerriemuir is to lay out the same amount in providing three schools for 555 scholars. New Deer, which is a purely agricultural parish, proposes to erect three schools for 414 pupils, at a cost of 3,000*l.* Dryfesdale, which is mostly pastoral, is to expend 3,600*l.* on one school, for 600 pupils. Gairloch, a parish in Ross-shire, 860,000 acres in extent, proposes to erect seven new schools for 631 scholars, and to enlarge others, at a cost of 10,000*l.*; and finally the School Board of the united parish of Dunoon and Kilmun have resolved to build four new schools for 580 scholars, at an expense of 7,270*l.* In all thirty-one schools, to accommodate 5,534 children, at a cost of 56,370*l.*, or nearly 10*l.* 3*s.* 8*d.* per scholar.

The reports of School Boards which have been approved of up to this date contain proposals to provide for the accommodation of 174,434 scholars, by the erection of 746 new schools, together with the enlargement of a number of existing school buildings.

The School Boards whose reports have not yet been disposed of propose to provide for about 56,000 scholars, and they have applied for building grants to assist them in making provision for this number. Should these reports be sanctioned, as will in all probability be the case, there will be established in all about 1,000 new schools, and the accommodation provided by the erection of these schools and the enlargement of existing buildings will suffice for upwards of 230,000 scholars. The expense thus incurred will amount to at least 2,070,000*l.*

If time had permitted I should have liked to speak of the enormous difficulties which School Boards in the Highlands and Islands have to encounter in providing adequate and accessible education for all the children in the extensive and thinly-peopled parishes under their charge. I should also have noticed the remarkable unanimity with which the School Boards have provided for religious instruction in conformity with the provisions of the Education Act, and the unsatisfactory position assigned to the secondary schools which have now been placed under the charge of the School Boards. But on the discussion of these important topics I cannot enter.

It would be premature at present to express a definite opinion as to the effect which the Education Act is likely to produce on the position, comfort, and qualifications of the teachers, and through them on the character of the education which will be provided for the community; but I may venture to say that in regard to all these points I cherish a confident expectation that the ultimate results will be highly beneficial.

Some Special Features of Teaching as pursued in Scotland.
By W. F. Collier, LL.D.

I PROPOSE in the present paper to touch lightly upon some of the special features of practical education in the schools of Scotland, not so much for the benefit of Scottish teachers, most of whom are entitled to speak on such a subject with quite as much authority as I can claim, but for the purpose of giving a little information to some of our English friends interested in the great work of education, who have come across the border to join the councils of this Association. And here at the outset I would disclaim any intention to overrate or underrate either English teaching or Scottish teaching. As a whole, both of them, I am sure, like all things under the sun, have their lights and shadows, their merits and their demerits. What I propose to do, is to state shortly a few dif-

ferences between the educational methods as practised in the two sister kingdoms, giving at the same time my own opinion of the advantages or disadvantages resulting from these differences, and drawing a lesson or two from a rapid survey of the existing state of practical education.

Although intelligent teachers on both sides of the Tweed agree in the main as to the methods which they adopt for working out the great problem of their profession—the training and arming of the young for the battle of life—yet, in spite of steam and telegraph, and all the fusing and confusing agencies of our century, there is still so marked a distinction between the English national character and the Scottish national character that we who teach in Scotland have adopted ways and habits of our own not insignificant in their action and results.

Let me first draw your attention to one or two differences in matters of organisation. First, as to the size of classes. In some of the foremost schools in Scotland there has existed for a long time a custom of grouping boys in classes of great size for the purpose of teaching them *en masse*. A generation ago, instances of a hundred boys being thus taught together were not uncommon, and those who visit some of our leading schools may still see masters face to face with classes of sixty or seventy pupils, engaged in drilling, as best they can, their numerous students in the mysteries of such subjects as Latin, grammar, arithmetic, or English spelling. No doubt much depends here upon the special faculty of an individual master for preserving order and keeping up the spirit of work, but in its best aspect such an arrangement is unfair to the master, who would need accomplishments more than human to produce results at all adequate to his expenditure of nervous power, and especially unprofitable for the very boys who most need to be taught, viz.: the backward and the slow. A dawn of enlightenment in this matter has been brightening over us Northerners steadily for some time, and it has come to be generally acknowledged in Scotland, and in many cases acted upon (we look to the School Boards to carry the idea into general use), that a class of twenty-five or thirty as a maximum is the largest that a teacher can face with any hope of fair success.

Then as to the allotment of time, I think, perhaps because use has familiarised it to myself, that a school day in one portion of six hours, such as we adopt here, from nine to three or ten to four, with a moderate break for luncheon and play in the middle of the day, is more conducive to good work

than the morning school, the mid-day dinner, and the evening school which prevail south of the Tweed.

Another point in the distribution of our working time in which we differ from Southern teachers is the allotment of our holidays. Starting on Monday morning we work during five full days of six hours each, and take Saturday as a whole holiday. This is now all but universal in Scotch schools. Rightly or wrongly, we prefer it to the Wednesday half-holiday and the Saturday half-holiday, believing that a half-holiday in the middle of the week has a tendency to impede the momentum and disturb the spirit of the work, thus rendering the teacher's duties more arduous and less effective by giving him, as it were, two Monday mornings in the week to get up what, in a city like this, I may be pardoned for calling 'the educational steam.' For, say what we will, the best of boys, and for that matter the best of men too, have some *inertia* to overcome at the beginining of the week's work, after the Saturday's frolic and the Sunday's calm. And for these reasons we advocate the whole Saturday free as giving both a better holiday and a better week's work than the other plan.

On much the same principle we limit our Christmas holidays to ten days or a fortnight, and adopt in our schools a ten months' session, with two months more or less for our long vacation.

Taking our higher-class schools chiefly into account, I believe that, as a rule, we pay more attention in Scotland to a solid grounding in the three R's, and we carry the study of these common branches to a much higher point in our curriculum, than used to prevail in England. In schools for the lower orders these of course form the basis of education in both countries. It is a notorious fact that, in examinations for the civil and other services, a very large proportion of the failures arise from deficiency in common branches, especially in spelling and in arithmetic. Now some of these failures may come, no doubt some do come, from Scotland; but I know as a matter of fact that our leading Scottish schools have long enjoyed the benefit of *separate* English masterships, held by men capable, not only of teaching to read and to spell, but of leading their pupils to a critical study of the great English classics, and of training them to the mastery of a correct English style; and our schools had these masterships at a time when the leading public schools of England left the study of the native tongue to be picked up by their alumni in a haphazard fashion from their

written translations from Latin authors or exercises of a similar kind.

The fitting complement to this advanced teaching of English in our schools is found in the fact that all the Scottish Universities have provision for the teaching of English literature—Edinburgh and Glasgow by separate chairs, St. Andrew's and Aberdeen by a combination of the subject with logic. There are, to be sure, at Oxford, professors of poetry and Anglo-Saxon; but those who know anything of the routine of Oxford life must be aware how slight a hold their prelections have on the attention of the main body of the students when compared with the course of English literature and language through which Professors Masson and Nichol lead their students.

A similar strain of remark may apply to the teaching of writing and arithmetic in Scotland. The old historic parish school, now superseded (time will tell us whether wisely or no) by the public schools of the new Education Act, were attended by pupils representing all classes of society. The laird's sons often went there; the minister's sons always, and the lads from the manse or the 'big hoose' had many a tussle in vulgar fractions or the rule o' three with barefooted boys, whose summers were spent on the hillside herding cows. Day after day the dominie stood, the 'cynosure of reverent eyes,' before his well-worn black-board, getting grey in the service like himself, and patiently worked out a complex sum, followed in every step by his eager disciples, whose answers were ready, and whose excited hands were flourishing in the air for the next step long before he, in his slower and more precise way, had neatly shaped the last uttered figure. For to him, impressed with the solemn responsibilities and dignity of his office, a slovenly made number proceeding from *his* chalk would have indicated dereliction of duty too fearful to contemplate; and he strove to inculcate, by precept as well as by example, that accuracy is *the one* quality whose name should be written in golden letters over every school-room door; and that he is wisest who takes as his motto, in the little world of the school as in the large world of life, the pithy Latin saying, so loved and acted on by Walter Scott, 'Hoc age,' which a Divine command has shaped into the solemn paraphrase, 'Whatsoever thy hand findeth to do, do it with thy might.' The day has gone by in both countries which made the study of the ancient classics the 'be all and end all' of our school education. The modern languages have claimed and are receiving their fitting place in our schools—the physical sciences, too, in their elementary outlines occupy some portion of the week in the shape of lecture or lesson—in short, 'the

boy of the period' enjoys advantages at school, as at home, that his father never had. But still classics, as they deserve to do, hold in all British schools of the higher kind a pre-eminent place in affording the best basis for a good education. Let us, then, glance for a very few minutes before concluding at the teaching of Latin and Greek in Scotland.

Although Scotland gave birth to the best writer of Latin verse since Latin days—an obelisk of stone, not twenty miles from where I speak, marks the place—it is well known that, with some few notable exceptions, the characteristic of Scottish scholarship is not elegance and refined grace. It is rather a rugged strength, which some might esteem a better quality. In minute verbal grammatical knowledge—in nice logical distinctions between words whose shades of meaning are like various shades of the same colour—in following the fleeting shade of an etymology back into the dim past, the Scottish Latinist yields to none. And the very training he has received at school, and which when grown to be a teacher he transmits to a rising generation, accounts for this kind of scholarship. The translation of a passage from Latin into English must be rendered at first with the most scrupulous literality, no matter how ungainly the English shape becomes into which the passage is thus twisted. This was the first duty of the pupil—to render every Latin word into its exact English equivalent; and then, having acquired a thorough verbal knowledge of the words, he was permitted to give a free or loose translation expressing the spirit of the passage. Now what may be called the aroma of a passage often lies hidden under a literal rendering of the words, and can be caught only by such a free reading as shall bring out the general scope and spirit of the author; and, if one rests content too easily with the former, he misses or imperfectly perceives the finer element in the literature from which he translates. This is *one* danger of too much literalness. The minute verbal analysis is carried almost to an extreme in the parsing of words. Given, say, a verb in the Latin lesson, it forms a text for a score of questions; such as conjugate the verb, repeat such and such tenses all through, name and distinguish any compounds of this verb, give any English derivatives, what is the Greek equivalent, the French, the German, tell any synonyms in Latin, point out the differences in the use of these, &c., &c. Every possible change is rung on the word. It is twisted up and down, inside and out, and held up in all variety of lights until every pupil in the class has had something to say of it, and the subject is exhausted. This kind of drill, recurring constantly, secures accuracy and solidity

of verbal scholarship, but often at the expense of elegance and the culture of taste. Taken by itself, it is too anatomical a method of treating languages to be cultivated alone. What may be called the drapery of the subject, the historical and geographical allusions, the discernment of poetic niceties of style, the mechanism of metre, and the cultivation of a sensitive taste in classic diction, which makes a false quantity seem like a heinous literary crime, to be classed only with a mistake in spelling or a blunder in grammar—in these respects, although we are improving by superadding these elegancies to the robuster scholarship I have described, yet in some respects we still fall in our schools behind the standard of the English culture.

The truth is, that from the very nature of Scottish schools as heretofore existing, classical training to a certain extent has been within the reach of all classes of society. The peasant's son has thumbed his Latin dictionary side by side with, it may often have been, the scions of noble houses. And the influence of classical studies has leavened even the local dialects of some districts with words of Latin growth, while in England classics belong essentially to the rank called gentlemen; and are almost unknown in the educational schemes for the working classes.

Fortunately for the future interests of high scholarship in Scotland, several of the men who now hold the classical chairs in our Scottish Universities are men of the double culture—Scotchmen trained in early life after the Scottish plan with its rigid adherence to verbal accuracy, but who have grafted upon this solid and sturdy stock the graces of such classic culture as prevails in the southern schools. The influence of such teaching as theirs will do much in the coming generation to fuse and blend the good qualities of both systems, to tone down the Doric roughness and preserve its strength, but combine that strength with a graceful elegance too often despised in the northern land as another form of weakness.

A Plea for the Ignorant Poor on the Question of Compulsion in Schools under the Education Act. By JAMES MCCLELLAND, F.S.S.L., J.P. for the County of Lanark.

THE question of continued attendance at schools on the part of the children of the working classes, under the recent Education Act, is of so much importance to their efficient

struction and training that it has wisely attracted the attention of statesmen in this country, as well as many of those interested in the development of the intelligence of the great masses of the people.

In order to effect this object the term 'compulsion' has, under the Act, been widely used by the greater part of School Boards, and by the parties employed under them.

Taken in connection with its usual import, the word has become obnoxious to many of the parties whose aid and concurrence have been asked for in the education of their offspring.

To an educated parent little pressure is needed to obtain compliance with the demand; but to many of those who are thoroughly ignorant themselves a demand to compel as well as to pay for the education of the children savours (to him) both of harshness and injustice. Such a parent considers the word offensive, and with the feelings often generated in such minds he refuses compliance with the demand. He may see, in his ignorance, little use for the education of his children, and may proclaim that his limited and narrow wage-means prevent him sending his children to school and paying the necessary fees for teaching.

With these feelings warring in his mind he considers it injustice that provisions in Acts of Parliament should, in his want of knowledge, be brought against him, and summonses to appear before magistrates.

If we place ourselves in the position of the ignorant parent, some difficulty is found in making a reply to his complaint. He thinks he is no more than his intelligent and educated neighbours to be compelled to do what is demanded of him, and many, when called before a magistrate, decline the summons, and refuse to pay the small fine imposed.

Should this prove the culminating point in the demand for attendance at school, it is difficult to see, without some other tactics than those hitherto in use under the Education Act being adopted, what should be done with such ignorant and obstinate parents. Looking to the school attendance throughout the country, this class of the poor are, doubtless, greatly in the minority. But, although they are so, it may be found that compulsion, as the ordinary mode of dealing with them, may not obtain compliance with the demand.

Ignorant parents, such as are alluded to, resemble in many respects the Arab tribes in almost all distant countries. Travellers tell us such tribes are peculiarly jealous of independence, will undergo privations of no ordinary kind rather than submit to oppression or compulsion, and thus give

infinite trouble to parties who, in passing through their country, attempt thus to deal with them. They are, however, said to be quite amenable to kindly treatment. Cattlin, the celebrated explorer among the Indian tribes of North America, told me, when I met him in Washington in May, 1872, that his secret in dealing with these tribes was always to cultivate kindly feelings towards them, never resorting to harshness. And as it is with the savage tribes, so it is with a portion of the ignorant classes in our own country. They are, in truth, somewhat akin to the Arabs of Africa, Australia, Fiji Islands, &c., &c.

Recusant parents, with respect to compulsion, are not usually to be found in the rural or country districts. In such localities the influence of the better educated classes, in a sparse or thinly populated district, is sufficient to overcome the repugnance of parents to send their children to school, and the ordinary and kindly appliances of the clergyman, the squire, and the employer of labour may be found sufficient to overcome the reluctance of the parent to the education of his children.

It is with the masses of the poor and helpless, resident in the purlieus of large towns and cities and other centres of the manufacturing population, that the School Boards have to deal. Compulsion with this class, in the present mode of dealing with the clause in the Education Act, has in many instances been successful, but as it is a method by no means congenial to the ignorant—sometimes not even to the educated—it would be wise to adopt some other plan by which the parent or guardian of the child may be reasoned into compliance with the requirements of the Education Act.

Human beings are always more readily persuaded by the law of kindly reasoning and treatment than by threats, however well intended, of compulsion and of fines.

This law is described in most eloquent terms by the late Rev. Dr. Chalmers, whose fame has long been and still is a househould word in this country, and especially in this city. In one of those eloquent lectures, for the composition and delivery of which that celebrated divine was long so justly famous, he thus puts in a plea for the kindly treatment of humanity:—

'Certain it is, the law of love or kindness cannot be carried to its ascendency over us by storm. Authority cannot command it. Strength cannot implant it. The threatenings of vengeance may stifle and they may repel, but they can

never woo this delicate principle of our nature into a warm and confiding attachment.'

Now, it seems to me that by thus using entreaty, and indirect but firm means, kindly applied, the cases which occur in school attendance will be much more readily overcome than by summoning parents before magistrates or School Boards, or by making any threats of such proceedings being adopted against the parent.

This plan has been most successfully pursued in the Northern States of America. There the word compulsion, as applied to school attendance, has hitherto been unknown. A much better word is, in our opinion, used in educational attendance. The Americans have adopted the words 'Truants' and 'Truantism,' and these terms are applied to all absentees from school. All such cases are specially attended to by 'Truant Inspectors.' These parties have instructions to visit the parents or guardians, reason with them as to the child's absence from school, and, by entreaty, endeavour to overcome all objections put forward by the parents. The class whose children are thus looked after as defaulters in attendance are, in most cases, the recently arrived emigrants from Europe, for the educated American thinks too highly of the privilege given to his children by the free school of that country to need entreaty on this head.

The children of those emigrants are found to be generally very ignorant before leaving the shores of our own country, but the inducement of the free school, and books without payment on condition of attendance, almost always overcome fancied scruples on the part of the parents, and thus the question of attendance is solved without resort to magistrates, fines, threatened imprisonment, or the use of the word compulsion.

It will thus be seen that it would be better yet in our country to blot out that word from our educational vocabulary, and substitute in its place the American terms, 'Truant' and 'Truantism.' The meaning of these words will have a far greater influence on the minds of the most ignorant parent than the word which we think has hastily been imported into the school language of our country; for no parent, however ignorant, though resenting the word 'compel,' wishes to have his child called a 'Truant.'

In some cases in America the inspectors, after unsuccessfully canvassing parents, attack the stray children, and form what they call Truant Schools. Such schools in this country, dealing with the really indigent refractory parents, might be

placed on the footing recommended by Miss Carpenter, making them partially teaching, partially working, and partially feeding schools.

Another plan might be adopted by the formation of a School Organisation Society, on the same excellent system adopted in the Charity Organisation Society.

Numerous voluntary agents, both of ladies and gentlemen, would take an interest and give personal aid in such institutions, and would have greater influence in inducing parents to send and keep children at school than demands of School Boards or of inspectors partially ignorant of their duties, though dressed in a little brief authority.

The ignorant know, even now, little of the legislation which has taken place on this subject, and less of the compulsory powers by which School Boards are armed; and until there is a common and universal opinion created among this class of the poor, of the absolute necessity there is for the education of their children, and until this opinion becomes endorsed by the more intelligent of their neighbours in all localities, there will continue to be an aversion to comply with compulsory laws enacted by Parliament, but of which the ignorant poor have, likely, never heard, and are perhaps unable, but through the School Board Inspectors, to comprehend the meaning.

The whole question, however, is only one of a temporary character in the school work of the country. In another generation the children of the masses of the people will have received a fair amount of education, and with its training and beneficial influence instilled into their minds will, doubtless, impress the minds of a new generation of parents with the acceptance of the same benefits they have themselves derived from attendance upon schools. In other countries it is found that this result has followed the continued and systematic development of the education of the people. Leaving out of account the children of the recent emigrant population of America, which yearly reach that country from Europe to the number of upwards of 250,000, the native born and bred American needs no compulsion to send his child to school. He has found its benefits in his own training; and exercising as he does the rights of citizenship in public matters, including School Boards' Committees and other ways, he is too sensible of the great benefit he has himself derived from education to prevent his child, like himself, becoming an educated and intelligent citizen.

Inspectors have little difficulty with this class of Ameri-

cans. The Truant Law is seldom applied to them; and leaving out the emigrant population, it is found a large average of the native American children attend school.[1]

The latest account of the public schools in Boston, of Massachusets, is comprised in the Report of the Superintendent of Public Schools for the year 1873. In that report special allusion is made to the subject of Truantism, and it is thus commented upon:—

'Our truant officers are expected to look after all children not attending school who are found in the streets without any lawful occupation. From their reports, and from information derived from other sources, I had good reason for believing that they are faithful and efficient in the performance of their duty. But as I occasionally hear it said in educational speeches, or read in some newspaper communication, that there are several thousand—from ten to fifteen thousand, I think, is the number named!—vagrant urchins in the streets, growing up in ignorance, idleness, and vice, I thought I would try to find out where they were. Accordingly, a week or two ago, on a bright and sunny morning, taking care not to select a holiday, I set out on a voyage of discovery. I went to all the railroad stations, I drove round the marginal streets, scanning the wharves and alley-ways, keeping a sharp look-out for boys and girls of school age. The result of this perambulatory expedition, which occupied two or three hours, was quite extraordinary in respect to the smallness of the number of school age that were found at all. Every one found was stopped, and his case inquired into. The whole number found was hardly more than could be counted on one's fingers, and among them was only one who had not a good reason for being out of school. This was a truant, who had slipped through the fingers of his teachers, and escaped the vigilance of the truant officer. The next day being fine, I continued the survey, going through nearly all the streets of a densely-populated section of the city. The result was about the same as that of the preceding day. The few children found, with one

[1] In 1873 Massachusets raised thirteen dollars per scholar, though three dollars was the legal limit. In seven years the school taxes had increased 100 per cent., while the valuation of property subject to tax had only increased fifty per cent. Mr. Dexter A. Hawkins, in a report dated in January 1874, says that the State of New York (with a population of upwards of four millions) is bound to raise yearly, for school purposes, two and a-half million of dollars; but so fully is the value of the schools appreciated, that ten millions of dollars are raised yearly for this purpose.

It is hoped the ratepayers of Great Britain will, ere long, imitate the liberality of our American friends.

exception, gave good reasons for their absence from scho He was a licensed newsboy, and was generally found in scho A similar district in another part of the city was inspected c the third day. It was the same thing over again. I propos to repeat this survey of the streets when the spring open In my last report, I presented a tabulated report of the doing of the truant officers during the past ten years. That report affords strong evidence of the activity of those officers, and it is no doubt largely owing to their labours that so few absentees are found in our streets. As I have already intimated, the Truant Law, which has been in operation for twenty years, has proved a powerful auxiliary in the warfare against ignorance. Let the sentiment once become universal among all classes of society that voluntary illiteracy is not only disgraceful but criminal, and there will be comparatively little need of the application of compulsory means to secure school attendance.'[1] The experience of the American system of education is found also to be corroborated by the statistics of some countries in Europe.

Taking the kingdom of Prussia before its incorporation with other portions of Germany, it is well known that a resolute system of school attendance, on the part of that people, has long and successfully been in existence, and pursued with the most efficient results.

When the French Government, in 1864, sent M. Baudouin as a Commissioner into Prussia for the purpose of examining the system of education carried on in that country, he reported that out of a population of eighteen millions there were only ten cases needed to be dealt with for non-attendance at school under the Education Law of that country.

The Commissioner also reported that, in 1864, in the kingdoms of Saxony and Hesse, the whole average school population attended, and there was no case requiring to be dealt with from truantism or continued absence from school.

These results must be consoling to all parties now engaged

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[1] Exception was taken by Dr. Rigg, in the discussion following on this paper, as to the accuracy of the reference made to the measures adopted by the American Truant Inspectors, Dr. Rigg averring the inspectors did little else than survey casually and at distant times, and then only to take truants to prison.

These observations seemed so much out of accord with the statements made by the author, that he communicated on this subject with the Superintendent of Public Schools at Boston. That gentleman, in his reply, dated November 8, 1874, states—

'1. That what the Rev. Doctor said, as above stated, could not well be farther from the truth.

'2. That your (the author's) statement could not well be nearer the truth.'

in the laudable prosecution of the teaching and training of the working classes of this country.

The parties to be dealt with in our country at the present time are the ignorant and sometimes degraded portions of our population.

A portion of these parties resent the application of the term compulsion, but are amenable, like most other portions of humanity, to kindly treatment, and are thus far more likely to be prevailed upon to send their children to school, through the unwearied and firm application of judicious Truant Inspectors; and leaving out of account a resort to the requirements of the law under this head, a general instruction to the police of large cities to co-operate with inspectors in overlooking children loitering during school hours on their respective beats would have a beneficial influence on the truants.

That the masses of the ignorant and poor have grown up in our day without education and instruction cannot be ascribed altogether to their own fault. Both the Church and the State have in times past been in many respects to blame. The question of what should be embraced in a national system of education for the working classes of this country, and what should be its quality and its character, have been party and political watchwords, both of ecclesiastics and politicians, for generations past; and while the rights and sometimes the duties of this class have been attended to, the education of the poor at the base of society has often been thoroughly neglected, and School Boards now have to deal with this class left hitherto in a chronic state of ignorance, and, with such a class, continuous kind and firm treatment in the education of their offspring may produce better results than the stern application of compulsory laws.

It seems, therefore, to follow from the foregoing remarks that unwilling parents in the education of their children are more likely to be overcome by the application of kindness and firm but considerate treatment than by the terror of magistrates, the imposition of fines, and perhaps threats of imprisonment; that many of the ignorant resent the application of compulsion in the education of their children, and that the work of overcoming this class in their attendance at school will be more successfully brought about by substituting Inspectors of Truantism for the present compulsory plan of gaining attendance of children; that, as this ignorant family class form only a minority of the children actually being taught at school, the necessity of dealing with them from neglect in attendance will

yearly diminish. Should these views be acceptable to the Education Department of this Association, it is hoped that School Boards throughout the country, and all interested in the work of the education of the masses of our population, may yet be induced to carry out instructions to their inspectors in the light of the contents of this paper.

It is hoped, also, it will be seen that the necessity for the work of Truant Inspectors will, year by year, diminish; and that, as we arrive at the period when the present generation of children come themselves to be fathers of families, viewing the results of the work in other countries, Truant Inspectors' duties will be confined to very limited areas in School Board districts throughout the country.

Higher School Examinations. By WILLIAM JACK, M.A., Examiner in Arts in the University of Glasgow.

THE clause (62) of the Scotch Education Act which provides for the incorporation of the burgh schools into the national system, is so far useful that it secures their national recognition and that it prescribes that they shall be managed with a view to promote the higher education of the country. But the authors of the Act, or perhaps those who were able to restrain the more generous impulses of its promoters, decreed that the higher class schools of Scotland should be little or no burden on general taxation. It is expressly provided (clause 64) that no part of the expenses of any such school—except (1) the expenses of the annual examination, (2) the cost of repairing, enlarging, &c., the school building—shall be paid out of the rates. The schools are maintained (1) out of endowments, the number of which applicable to them is somehow very limited in Scotland, (2) out of the generally very small sums which used to be contributed to them by town councils from the common good of the burghs, which sums the town councils were adjudged to continue paying for ever, and (3) out of pupils' fees. A serious encroachment may be made upon the latter, should the School Boards act in the spirit of the clause, which directs them, as far as practicable, to throw elementary teaching out of their programme, and to devote themselves, as much as possible, to the higher branches.

The few higher class schools in Scotland have almost all

been more or less combinations of select elementary schools for the younger children of the middle and upper classes, and of higher schools proper. It is perfectly possible—it may be proper or necessary—to cut away from institutions like the High School of Glasgow the whole of the pupils who are doing the work which would be expected of the first, second, third, or fourth standards of an elementary school; but it can only be done, to begin with, at a very considerable sacrifice of school income, and it is not of course certain that the sum thus taken from the fund for payment of the teachers will be replaced.

Perhaps I may first refer to the examination itself. The principal question raised—one of extreme interest to the teachers and to the public—refers to the publication of the examiners' report. The Act leaves the matter to the discretion of the Board, and it is perhaps better that it should do so. No moderately experienced and discreet examiner of complex institutions like our higher public schools, is likely to forget that an imprudent over-statement—even a statement of what may in itself be perfectly correct—may seriously injure individual interests, or may hurt the school. In one, two, or three days, as the case may be, a couple of examiners have to test the year's work of from three to a dozen teachers, each of whom ought to be an accomplished scholar in his own department. Hitherto, even the process of public examination has been unfamiliar to the schools; and as each appointment of an examiner is for one visit, and for a single school, the teachers must always be prepared for new methods to be tried on their pupils by men of whom they have hitherto seen nothing. The conditions of examination are less favourable to the teacher, and the difficulties of the work of examination are greater than in the well-known routine of Government inspection in an elementary school according to specified standards, by a permanent officer; and the fact compels moderation and cautious under-statement of things unfavourable which may be noted in the reports. It may make it a very serious question with a School Board whether they ought or ought not to make a particular report public.

On the other hand, publication has its obvious and very considerable advantages. It brings the pressure of a considerable public opinion to bear at the places where an additional stimulus is needed. Even when the report goes no further than the members of the School Board, its effect on the teachers may frequently be considerable. But it is only in an indirect way that it can touch the amount of money they are to receive, and I believe that it would be unfortunate if it did so more

directly. The higher class of teachers in our higher schools are quite sufficiently sensitive to intelligent praise or dispraise. Under the Act, the fees in public schools are thrown into a common fund, paid to the School Board treasurer, and all divided among the teachers in such proportion as the Board thinks just. But the Act saved vested interests in some vague way, for nobody can precisely say what under the Act is the vested interest of an ordinary grammar school teacher. As a consequence, some of the School Boards had, when I visited the schools, made no change—none, I think, had made any sweeping change on the old arrangements. These arrangements were very simple. Each teacher fought for his own hand, and each pupil paid for just so many classes in each department as he attended, and no more. The teachers of the branches of an English and commercial education thus received large sums; whilst classics, mathematics, science—had there been any science—and generally all higher subjects, paid poorly, because they attracted only picked scholars.

The effects of this regulation were very singular. In one school, arithmetic, geography, and mathematics fell to a single master; the history lesson was of necessity divorced from the geography lesson; and geography could not be taught in the course of the reading of history, for fear Mr. A. should poach upon Mr. B. In another, geography—a good paying subject—was thrown into the classical master's department, to keep him supplied with a reasonable number of pupils and proportion of fees. The custom of the country made the fees for each class moderate; and there was a temptation to subdivide subjects, as, for instance, grammar and composition, grammar and English reading, English and history, and so on, so as to extract, without too much grumbling from the parent, a reasonable sum for the master. I think the system reached its absurdest climax when I found that the grammar pupils in an English department confined themselves strictly to repeating the rules and correcting the exercises in their grammar-books, and never attempted to apply the principles they had gained either to the analysis or to the construction of an ordinary sentence. The members of the grammar class were in various classes in English, so that they had no reading book in common. In two English departments—in one for certain—there was not, I think, a map even exhibited of Scotland, England, Ireland, or Europe. As present incumbents disappear, these anomalies will go with them; and the schools will be so organised that it will be nobody's interest to separate subjects which are indissolubly bound together.

But it is of the utmost importance that everything should be done to advance this good time coming. Nobody clearly knows what these vested interests are; and the teachers,—though being seldom overpaid and being mostly frugal men, they are by no means indifferent to money questions—are generally anxious for the prosperity of their schools. I believe that, by the help of a little of what Lord Neaves on a famous occasion called 'the come-and-go system,' School Boards and teachers may very reasonably hope now to adjust many of these questions on a footing to secure all the advantages of re-organisation contemplated in the Act. Masters who have long had much more money than their colleagues will often be found willing to drop some, though they cannot reasonably be expected to drop all the excess to which they have been accustomed. It would be a serious check to the educational advances the country will expect in its higher schools, under the new system, to have them continued during an indefinite number of years, on the basis of separate departments, with clashing individual interests, every master drawing his own fees. I believe that in the Edinburgh and the Glasgow High Schools the difficulty has been completely surmounted. When it is removed, the question of organisation at once arises. In some institutions *solvitur ambulando,* or, things take their course. A boy, for instance, comes to the school for one or two classes, and gets his other teaching in a rival school next door. He or his father thinks the mathematics, the English, the classics, the geography, ill taught in one place, and he takes that portion of his instruction elsewhere. It is needless to say that a large infusion of such pupils disorganises a school, while in a large town it is not easy altogether to exclude them. It is, and in all time it will be true, that one master out of a number is comparatively inefficient; and there is risk in setting one's self too resolutely against the tendency to remedy the evil in a natural way. There are departments also—such, for instance, as drawing, book-keeping, sciences—in which some pupils require training who have no wish for the other branches taught in the higher school; and it is plain that no hard and fast line can be laid down—at least in institutions which, like our higher schools, are universally day schools—to exclude these casual or occasional pupils. But the presence of a great number of them should never be encouraged, and it is a sure indication of a generally recognised unevenness in those departments of the institution. Another plan is the absolute opposite of that of which I have been speaking. In this system there is a curriculum—carefully thought out and steadily adhered to.

The boy enters the academy at seven, and, barring accidents, one can say what he will be learning at a given hour of the day any time between that and sixteen. It is just as plain that this system is too rigid, as that the other is too free. A regular remove once a year—perhaps, once a half-year—a remove calculated for boys reasonably intelligent and industrious—is an excellent thing, and all those who prove that they are so, ought to make it. But those who cannot—who have been neglecting their work—ought to be kept back, and not allowed to hinder their neighbours. Those, on the other hand, who are good enough, and are ready and able to make two leaps, should be allowed to do so. Every class should be approximately even, so that the average boy is neither unduly hampered, nor so distanced as to make him despair. A curriculum, tempered and modified by periodical school examinations, whether they are held specially, or whether the result is arrived at by marks kept by the master showing the pupil's whole progress since last time, seems to me a right and a practicable thing in our Scotch grammar schools. Doubtless it is one great advantage in having a rector that he, and perhaps he alone, can be looked to to organise such a curriculum. The old independence of each master of a department has, however, had this good effect, that any master with special tastes and gifts could almost always inspire his own pupils with them, and that newer studies have perhaps, in consequence, had more room for development in Scotland than in England. The English head-masters, as the Bishop of Exeter says, have been almost all classical scholars, and when the demand for the new sciences came they organised them indeed, but it was into holes and corners of time, so that they fell naturally to the inheritance only of the duller boy. We are hampered by no traditions, and it is not necessary that all our head-masters should be classical men, nor is it absolutely essential—though I, for one, think it generally most desirable—that we should have head-masters at all. At all events, we should struggle hard to retain all the freedom, the variety of teaching, the equal authority of different studies which came natural to us in the old days, when every teacher's hand was against every colleague.

I have hinted that I found next to no attempt at science-teaching. Let me say that I think the cry for science-teaching has been raised a little too loudly. I don't believe in political economy, or chemistry, or animal physiology, or physics taught in elementary or other schools to children of ten. But I cannot doubt that there is real room for them in

schools which should certainly aim at providing sufficient healthy pabulum for a boy till he is at least sixteen. A school like the High School of Glasgow is the end of many a lad's education, and it may fairly be expected of it to provide him with active exercise for his intellectual energies all the time he is there. It is not a University, but it overtakes the University work; and it would doubtless be well for everybody if it were able to make good its title to keep boys from the University a year or two by giving them teaching better suited for their years than colleges can supply. In order to do so, it should surely aim to supply them with at least the elementary ideas of some sciences. There is another point to which I venture to call attention. Almost all these schools are better organised for boys than for girls. The girls want no Latin and mathematics, and the boys and the masters do. So they have to fill up with some pretence lessons on superfine grammar and analysis, to make shift with modern languages and drawing, which is rarely very well taught, or taught as it should be, to the greater proportion of the pupils, and for very weariness to throw themselves on their foreign languages a little, and their music a great deal. The High School of Glasgow is organised for boys only, and there is nothing as yet corresponding to it for girls at all. When the school for girls is set up, it is to be hoped that the scheme of education will be calculated for them and their requirements as carefully as the schemes of education of almost all our public schools have hitherto been calculated for boys. I do not doubt that we have long been doing injustice—less perhaps than in England, for our grammar schools are, as a rule, mixed schools—to the more influential half of the creation. I venture to state no theory of female education here, but I am confident that the education of girls, both on its own account and for its indirect influence on the children of whom these school girls are in time to be nurses and mothers, is at least as important as that of boys.

The Royal Incorporation of Hutchesons' Hospital in the City of Glasgow. By Thomas Menzies, F.E.I.S.

THE brothers George and Thomas Hutcheson, of Lambhill, notaries public and writers in Glasgow, founded the Hospital and School in 1639 and 1641. A sum of about 68,700 merks Scots, equivalent to 3,812*l.* sterling, with a 'tenement of land' and a 'barnyard' on the north side of the Trongate,

formed the original bequest. The object of the bequest, as defined in the deeds of the testators, was to make provision for the clothing and maintenance of twelve aged citizens in decayed circumstances; and the clothing, maintenance, and education for a period of four years of twelve orphan or destitute boys, about seven years of age, sons of burgesses. Thereafter apt pupils were to be maintained and educated for a further period of four years at the grammar school. The magistrates, town council, and 'ordinary ministers' of Glasgow were vested with the management of the Hospital; and the testators' will contained a recommendation to the magistrates to make university bursaries at their disposal available for Hutchesons' pupils who should distinguish themselves at the grammar school.

In 1641 the Hospital maintained one man and one boy: in 1649 twelve men and twelve boys. The vicissitudes of the Civil War in Cromwell's time affected adversely the Hospital's property, which consisted mainly of land in the neighbourhood of this city, the testators' directions being that the funds bequeathed by them should be invested in 'arable lands near to Glasgow.' In 1652-53 the school was closed; and although it was again re-opened in 1661, the boys do not appear to have ever afterwards been boarded in the establishment, but they received money payments towards their maintenance. As regards the old men pensioners, it may be mentioned that they continued to reside in the Hospital buildings till about the middle of the last century—the practice having obtained from an early period of letting parts of the Hospital for shops, with the view of increasing the revenues. The resources of the Hospital having improved, we find eleven men and four boys on the funds in 1661, and in 1667 the prescribed number of twelve old men and twelve boys. From this date (1667) to 1712 the number of old men and of boys provided for continued about twelve. In 1715 the numbers had increased to fifteen old men and sixteen boys. Widows and daughters of such persons as would have been eligible for pensions were admitted to the benefits of the Hospital in 1737. At the beginning of the present century the roll included fifty-three male pensioners, seventy-three females, and forty-eight boys. The rapid prosperity of the institution will be understood when it is mentioned that during last year 842 pensioners were paid no less a sum than 6,808*l.*; 200 boys received clothing and education in the Hospital school, and ten boys in the high school, with an average allowance of 4*l.* 10*s.* to aid in their maintenance; 25 boys were educated at other schools, and three

students attending the University had allowances amounting to 50*l.* Arrangement has recently been made to grant allowances of 20*l.* for the purpose of enabling four students of merit, old Hutcheson pupils, to prosecute their studies at the University next session.

It must be gratifying to all interested in the prosperity of our charitable institutions to know that the gross annual income of Hutchesons' Hospital now amounts to about 17,000*l.*, and its stock, including several minor bequests, to 360,000*l.*—a result due in no small measure to the interest and care the preceptors and patrons have taken in its administration, and the fidelity and forethought with which the chamberlains have transacted its business.

Keeping in view the directions of the founders, the patrons have, as opportunities occurred, made advantageous purchases of land in the neighbourhood of Glasgow adjoining their other property; so that at present the Hospital is possessed of 116 acres in a locality towards which the city is rapidly extending, and the feuing of this land will add materially to the income of the institution. In 1842 the idea of extending the educational benefits of the Hospital—*particularly to girls*—was suggested, though without immediate practical results. The subject, however, continued thereafter, from time to time, to excite the interest and attention of the patrons. The committees appointed annually to visit the homes of applicants for admission into the school were impressed with the idea, from circumstances brought under their observation in these visitations, that much good would result to the community were the educational benefits of the Hospital extended to girls.

Two years ago, after careful consideration of the matter, the patrons applied for and obtained an Act of Parliament empowering them to expend a part—not less than one-half, and not exceeding two-thirds—of the revenues of the Hospital in pensions to citizens of Glasgow, or persons who, in the estimation of the patrons, are considered needful and deserving of aid, who shall have carried on business or trade in Glasgow for some time on their own account with credit and reputation; or who shall have been in any way the means of promoting the prosperity of the city, and who by misfortune have been reduced in circumstances; and also to the widows and daughters of such persons—under the proviso that none of the persons, at the time of applying for, or whilst in the enjoyment of, a pension, shall be in the receipt of parochial aid; and to apply the remainder of the revenues in furthering the cause of education.

The principal powers obtained in the Act as regards education are as follows:—To continue the present school for the education of boys, gratuitously or on payment of fees, modified or otherwise, as also clothing; and to alter, enlarge, or remove elsewhere the present school. To establish a similar school or schools for the education and training of girls. To erect, acquire, or establish and maintain, additional schools in such situations and localities as they may see fit and proper, for affording to boys and girls education of the description given in the existing school, or a higher English education, and classical, commercial, and scientific instruction; and in either case for payment of fees, modified or gratuitously. To establish evening classes in the schools for boys or girls, and libraries and reading-rooms in connection therewith. To assist the education of children brought up in Hutchesons' schools, indigent children, orphans, or children of parents who are unable to afford it, by payment in whole or in part of their fees, and thereby enable such children to attend other schools in Glasgow affording a high-class education. To contribute annually towards the salaries of teachers or lecturers, or towards the purchase of books, models, instruments, or other apparatus requisite for educational purposes in any mechanics' institution, school of art, or educational establishment now existing, or which may be founded or established in Glasgow. To send scholars of merit and attainment, educated in Hutchesons' schools, or who have received assistance from the Hospital, to attend English or Scotch university local examinations for scholarships, exhibitions, bursaries, or other examinations of a like kind. To assist deserving boys in prosecuting their studies at the High School and University of Glasgow or elsewhere, with a view to professions requiring long or special training; and to found bursaries, fellowships, or scholarships at the University of Glasgow, or any other university in the United Kingdom, obtainable under such conditions, and tenable for such periods as shall from time to time be determined by the patrons.

The Act provides that the schools under charge of the patrons shall be open at all times to Government inspection. By the Act the Governorship of the Hospital was extended. It now consists of the lord provost, the magistrates, the lord dean of guild, the deacon convener, the councillors of the city of Glasgow, three persons elected annually by the Merchants' House, three by the Trades' House, the ministers of the ten city parish churches, and six ministers elected by the patrons 'from amongst the ministers of religion officiating in Glasgow, and not being ministers of the Established Church.'

Hutchesons' School, which is situated in Crown Street, on the south side of the river, was erected in 1841 on a plot of ground containing about 3,000 square yards, a portion of which, 2,544 square yards in extent, is playground. The class-room accommodation comprises 3,240 square feet. About 240 boys are at present clothed and educated in the school, and a limited number receive a small sum yearly to aid in their maintenance. The boys are admitted between the ages of eight and ten years, and continue at school for five or six years. Before admission they must undergo an examination suitable to their age. The teaching staff consists of a head master, three English teachers, a music master, a drawing master, and a drill instructor. A sound English and commercial education is given, with the elements of Latin, Greek, French, mathematics, drawing, music, drill, &c.; and the extension of this course is in contemplation.

Space being available at the school, it has been taken advantage of to alter and extend the present buildings, so that accommodation will be provided for about 600 boys and girls. Two angles of the present building, which had been erected mainly for architectural effect, have been taken down, and instead thereof larger rooms are in course of erection with an additional story. Ten spacious class-rooms, with the most approved fittings and apparatus, will thus be provided, giving an area of 8,000 square feet for ordinary teaching purposes, and 1,722 feet for a gymnasium. A new building of three stories, having a frontage of 75 feet to Rose Street (on the east side of the playground), is in course of erection, with a projection of two stories, 86 feet long by 37½ feet wide, carried on pillars, which connects it with the present building and keeps the playground intact. Besides the class-rooms and head master's house, the buildings will contain the patrons' board room, school library, lavatories, kitchen, hall for dining and other collective meetings, janitor's house, and outhouses. The estimated cost of the alterations and extensions amounts to about 15,000*l.* Arrangements will be made by which separate school-rooms, playgrounds, offices, and accesses will be provided for the girls; and if considered desirable and expedient now or at any future time, the boys and girls may be taught in certain classes together.

It has been resolved to provide a mid-day meal for the scholars, many of them, the school not being a local one, coming from distant quarters of the city. The head master, after an experience of twelve years, is of opinion that the want of such a meal is prejudicial to the health of the pupils, who are often

the children of poor widows, and that its provision would be advantageously felt in the renewed vigour with which their afternoon studies would be prosecuted. Provision has accordingly been made for a dining hall and kitchen with other necessary accommodation. Advantage will be taken of this arrangement to teach the girls cookery and domestic economy, besides the ordinary literary instruction, music, drawing, knitting, cutting out and sewing, &c.—an experiment which should commend itself to the sympathy of this Association (especially after the forcible recommendation of the subject by the Earl of Shaftesbury on Friday evening last).

The patrons are aware how deficient a large proportion of the female population are in even the rudiments of cookery, and recognise the resultant evils—financially, physically, and morally—which a moderate knowledge of this art on the part of wives, sisters, and daughters would tend to avert. The absorption of female juvenile labour in commercial centres precludes the opportunity of acquiring skill in household duties at home, particularly in the very important one of cookery; and when such work is performed by unskilled hands, food is frequently uneconomically and unwholesomely prepared, health injured, and home happiness marred. It is considered desirable, therefore, to encourage instruction in domestic economy, especially practical cookery. Apparatus of the most approved kind will be provided for cooking the mid-day meal in bulk, and for the preparation of ordinary domestic dinners at open grates, or by steam or gas; and perhaps for lectures on cookery with experiments.

The patrons are also looking forward to the establishment of schools in different parts of the city.

From this brief statement of the affairs of Hutchesons' Hospital, it will be apparent that the patrons are fortunate in having obtained an Act of Parliament extending the usefulness and benefits of the Hospital, and in having ample and growing means at their disposal for advancing the educational interests of the citizens of Glasgow.

University Examinations for Women.[1] By DOROTHEA BEALE, Principal of the Ladies' College, Cheltenham.

I PROPOSE to divide my subject into two parts. In the first I shall treat of examinations for girls of school age in reference to their effect upon schools, for I think that in a few

[1] See *Transactions*, 1870, p. 552.

years nearly all English girls will be educated in large schools, as is the case now in countries where education is most valued, as Germany, America, and Scotland. I think that mothers who have been educated at good colleges will wish to send their children to their old schools, as do old Etonians, Rugbians, Wykhamites. I think that, looking back through the vista of years, they will see there are many lessons useful to know throughout life, which cannot be learned in seclusion, and that the force of 'custom, collegiate and combined,'[1] is a power for good which ought not to be lost, because, like every other good thing, it may be perverted to evil.

In the second part I shall speak of examinations for women, and shall touch upon the vexed question of degrees.

It is a new thing for girls to be examined at all—at least by competent persons—especially new for those who are not to be national schoolmistresses or governesses. Many inexperienced persons are still opposed to it, not understanding that it is a necessary part of all education, and that periodical examinations by competent external examiners are required to ensure efficiency. Such examinations are useful to the teacher, the parent, the pupil.

The teacher may be very earnest, but an experienced critic of his work may be able to point out where and why he has failed, and from a larger experience to suggest improved methods.

The parent may wish to choose a good school, but lack opportunity and means of judging. The inexperienced cannot judge of education; they often expect too much, as we see by the criticisms on school-girls' drawings. Experts are required to test our food, architects to see building is well done, and examiners are necessary to test the work of teachers.

Lastly, examination is of value to the student himself, 'making distinct to him his knowledge and his ignorance.'[2] School examinations are of two kinds. The first—such as the university local, which are conducted at one centre, but are common to many schools—I will call central examinations.

The second, like those conducted by Government, which are special for each individual school, are called inspectional. Each has its own value in the work of education, and to both there are objections. It is perhaps by a judicious combination of the two that we may hope to get the greatest amount of good.

The local examinations have been very useful, especially in

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[1] Bacon. [2] Dr. Arnold.

girls' schools, bringing them into relation with the national centres of education. The old-fashioned parrot-learning and slovenly, inexact work have been shown to be worthless, and a better curriculum has been introduced. Still I feel, in common with the masters of our great public schools, that these examinations are not all we want. (1) They invade liberty. The University Syndicate fixes the portions to be taught of the Bible, history, &c., the books to be read in foreign languages. An arbitrary value is assigned to special subjects, and thus almost all are excluded from Classes I. and II. who do not attain a high standard in classics or mathematics. The tendency of these examinations, therefore, is to assimilate the curriculum of a girls' to that of a boys' school. No despotic examinations, as Dr. Patterson[1] has shown, can be altogether satisfactory, none which compel the schools to follow them instead of following the schools. Instead of the examiner being supreme over the teachers, the position should be reversed. Central examinations may help to perpetuate false systems. Universities, schools of learning, when invested with supreme authority, have checked spontaneous thought, have retarded the progress of science, the introduction of new branches of knowledge, and have attached exaggerated value to obsolete practices.

2. In the local examinations there is often a want of correlation and sequence.

In school-teaching we wish for something of harmony, wish to make one class illustrate and supplement another. Thus, if we take up the English history of the seventeenth century, we should have a second course on the Continental history of that period; we should make the writers of the time, especially Milton, our subject for literature. In French we should take some works of Corneille or Racine, and in German, perhaps the Thirty Years' War. The Oxford examination for one year gives the seventeenth century for English history, a play of Shakspere; in French, the history of Louis XI., and in German a Mährchen, not very suitable for girls. Again, school-teaching of history should be continuous. Oxford prescribed for one year part of the seventeenth, for the following part of the eleventh century.

3. The selection of books is not always suitable. When only two or three books are chosen, one would expect these should be masterpieces—one year the first four chapters of Southey's 'Life of Nelson' were set, and, strange to say, the next year the last four.

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[1] On Academical Organisation.

4. The amount of work in some subjects is more than can be properly accomplished in a year; it has to be hurried over, and is badly done. In Scripture, *e.g.* there are three or four books, besides theological works and the Prayer-book. In English history, besides the outlines, a detailed knowledge of the history of England from the accession of William III. to the death of George II.

5. Central examinations, taken alone, certainly offer some temptation to the teacher to work up a few at the expense of the many, the clever to the neglect of the dull.

6. The pupil cannot altogether banish from his mind that he is preparing for examination. One who is learning, without any prospect of having his work tested, is often listless and inexact, satisfied to know something 'about a subject' without trying to grasp it. On the other hand, one who is merely preparing for examination is restless, always thinking of getting over ground, instead of dwelling upon thoughts until they are absorbed into his being and become part of himself; and then, when the strain is over, he is likely to miss the accustomed excitement and find study flat and insipid. 'The habit,' writes Dr. Patterson, 'of preparing for examinations tends to make the learner restless and volatile; he loses the appetite for patient thought and quiet study.' Lastly, those who are aware that a test will be applied to their work, but know that the examination will turn just upon that which is daily put before them; that the more they grapple with difficulties the higher will be the value put upon their work; that they are not required to hasten on at a pace to which they are, or fancy themselves, unequal—these study with a care and seriousness which do not belong to the first, and with a quiet calmness which does not belong to the second. In preparing for a central examination one is tempted to think first of being safe; and an examiner can hardly pluck one who has a good amount of knowledge, even though he has no real philosophical acquaintance with the subject. An inspectional examination founded upon a syllabus of school-work will test a much higher kind of knowledge. It can hardly depress, it is almost sure to raise the aims of the teacher. 'It is only when the relative position of the two momenta of a student's existence is inverted—when, instead of being questioned on the matters learned, he learns only how to stand being questioned—that examination becomes an evil, and a sophistic art is found to have taken the place of scientific training.'[1] In some subjects, I own, such as

[1] Patterson 'On Academical Organisation.'

language and mathematics, a central examination is nearly as good as a special; but in Scripture, history, literature, and nearly every other, the examiner should be told what has been done, and how the subject has been studied.

I am anxious, therefore, that the system of inspectional examination by a central authority just now initiated for public schools should also be applied to large schools or colleges for girls, and 'leaving certificates' should be granted equivalent to the certificates given for passing a preliminary university examination. For some years past we have granted such a certificate upon certain conditions, and we have found this valued more than a university certificate, because it bore witness, not merely to knowledge, but to training and character. Such an examination in no way interferes with the liberty of each school, and this is a great recommendation. Of course this adds to the labour of examining, and examining power is not over abundant. Possibly, however, a group of schools might agree upon a common curriculum sufficiently elastic to secure liberty, and sufficiently uniform to facilitate examinations. This is the plan pursued in the grand schools of St. Louis, Missouri, where over 30,000 children are educated. I commend the report, and especially the excellent spiral tables of instruction, to the consideration of all interested in the subject. I am aware that an inspectional examination is offered by Cambridge, but for various reasons, into which I need not here enter, it appears to have had but scant success. Something of the kind is done by the College of Preceptors. Had they merely granted a certificate to those who had completed their school course, they would have acted wisely; but it is difficult to restrain a smile on hearing that a learned body offers to a child of eight a paper certifying his knowledge of English history to the end of the seventeenth century, English grammar, arithmetic, geography, and either Latin or French. Had this not been seriously given in evidence before the Schools' Inquiry Commissioners, I should have thought there must be some mistake. I can only refer to the Blue-book.

If this system of 'leaving certificates' is adopted, subsequent preliminary examinations will, of course, be spared to the universities, and the student will be relieved of the unfruitful getting up of outlines at a time when he should be giving himself to deeper studies. One might hope that it would one day be as unusual to leave school without a certificate as the university without a degree. Parents would come to desire such testimony to their children's progress, and would learn

that a girl could not, however good the school, be finished in a year or two. The schools, too, might hope to escape the credit of educating 'finished' pupils who could produce no certificate. Very much would be gained if the school-time of girls could be prolonged. 'There is,' writes Professor De Morgan, 'in every branch of study a beginning, a middle, and an end. A beginning, in which the student is striving with new and difficult principles, and in which he is relying, in a great measure, on the authority of his instructor; a middle, in which he has gained some confidence in his own knowledge, and some power of applying his first principles. He is now in a state of danger, so far as the estimate which he is likely to form of himself is considered, he has as yet no reason to suppose that his career can be checked—nothing to humble the high notion which he will entertain of himself, his teachers, his subject. Let him proceed, and he will come to what I have called the end of the subject, and will begin to see the commencement of a region in which not all the skill he has acquired in voyaging with the chart will save him from losing his way. Then he will begin to form a true opinion of his own mind, which is not done by many persons, because they have never pursued any study far enough.'

It is very often when girls have reached the first, usually when they have reached the second stage, that they leave school. Is it wonderful then that we often find ignorance and conceit, that resolutions about home study so soon fall to the ground, and after a few mistaken efforts the task is given up as hopeless? This is not so if a girl be allowed to continue her studies until she has reached the third stage; when she has once stood in thought beside that ocean on whose shores Newton gathered a few pebbles, she cannot think her own knowledge vast; when she has been rewarded by the sight of some marvels of that shore, she will never cease to search for more. If she has acquired the habits of self-control, which education is designed to give, she will perform better every duty of life.

I do not wish that an inspectional should entirely supersede local examinations: these, although they do not act immediately upon the whole school, have yet an indirect influence; they may continue to be useful in the highest classes, and by their means the position which one large school occupies amongst the schools of the country may be perhaps best ascertained; they will continue to be the only means for testing by university authority the work done in small schools and private houses.

II.

I turn next to the English University examinations, open to women over eighteen without any restriction of age.

(1) There is the examination of the University of London; (2) the higher local examination of the University of Cambridge; (3) the examination conducted in connection with Girton College, the same as the degree examination, but not recognised by the University—this confers, however, no degree, even though the students submit to all the University rules, and attain a standard sufficient to obtain honours; (4) ladies studying at Merton have taken different portions of the degree or honour examination, and the examiners have assigned marks to their papers.

Of these the examination of the University of London stands alone in its claims to be peculiarly adapted to women. It is, however, almost identical with, and is officially stated to be equivalent to the Matriculation. I scarcely think that where they differ the advantage remains with the women.

Far more subjects are required than for the Cambridge higher examination, and failure in any one is total failure. The theory of the University seems to be that education should be pyramidal; in each succeeding examination for degrees less subjects are asked for, but higher attainments.

I prefer the London examination, because it encourages a greater breadth of culture in the earlier stages of education. Without any sacrifice of thoroughness, it is possible to acquire a real, though elementary, knowledge of the various subjects named, and this is often of great value. One who has in early youth grasped the fundamental ideas of geometry, become familiar with mathematical demonstrations, or understood the primary laws of chemical science, seems to have gained a new faculty, which it is easy to develop in later years, though it would then be difficult to acquire; an interest too is awakened which often lasts through life. Besides, the minds of the young require for their healthy development a sufficiently varied dietary; and a certain versatility, a power of entering with interest into various pursuits, is especially desirable in a woman. Elementary must not be confounded with superficial knowledge; it is of the latter that the poet speaks as a 'dangerous thing'—the former is the necessary beginning of all knowledge.

On an average less than ten pass this examination annually. This small number is due in part to the large proportion, about

seventy per cent., of failures at the London centre; in part to the great expense of a local centre, and also to the fact that this being an examination especially for women, it is, as Mr. Lowe pointed out, like a foreign coin, which people do not like to take because its value is not known, and it is therefore less esteemed by many than the far less difficult Cambridge examination.

Those who have passed the general examination may obtain special certificates, and thus girls who have left school are encouraged to take up at home any study for which they have a taste. In this respect the London and Cambridge higher examinations are very useful.

One who takes the Cambridge examination may take as many subjects and go as far as the London examinee, but it is possible to get a certificate with much narrower acquirements. To have passed the London examination is always a distinction, to have obtained a certificate from Cambridge is not so in itself; one must further inquire what class was taken in each group.

In one respect the Cambridge examination is *far better* than the London. Candidates are not excluded from examinations because they have passed before, but may try the next year for a higher class. If the London examinee is unfortunate enough to pass in Class II., she is stamped for life; most would rather fail altogether, because in that case they could try for honours the following year. To a man his position in the matriculation list is of slight importance, because the degree examination is the great test; to a woman it is everything, and I think that under a certain age, say twenty-two, she might be allowed to try again, paying the fees a second time.

Again, the Cambridge certificates for each group are classed: in London there is nothing to mark the distinction between a candidate who did extremely well and one who almost failed. On the other hand, I think it a pity that the languages are grouped together by Cambridge: one who is a perfect French or German scholar could only be in Class III. of Section B, since the number of languages taken increases the marks for the section. What people want to know of a teacher is, which of the languages she understands well, and not what is her aggregate knowledge of language.

The other examinations have existed too short a time to admit of our drawing conclusions. From Girton three have passed the degree examination; two took the papers for the classical tripos, and were declared equal to candidates who obtained honours; one was examined in the papers set for the mathematical tripos, and the number of marks obtained would

have placed her among the senior optimes. These students had fulfilled all conditions of residence.

One from Merton has also, in conjunction with the Girton students, taken the degree examination.

The question of the admission of women to degrees has for the last dozen years been before the University of London. It was strongly advocated by Mr. Grote in 1862. 'In refusing degrees,' he argued, 'the Senate was called upon to say, "We consider our studies laudable and deserving encouragement only for men; they are not laudable, and we intend to discountenance them in women. We cannot grant academical honours and advantages, which will tend to encourage what is a bad and wrong type of education for women." I maintain this is an answer which the Senate is not warranted in returning. This would be to usurp the right of determining by authority a point which individuals have a full discretion to determine by themselves. I contend that every woman has a right to choose for herself among the various types of education; if among these she prefers that which coincides with our curriculum, we ought to be the last to discredit her for so doing. The recompense and privilege (asked) is an authentic record of proficiency, upon proof given of diligent and successful study.'

This year Convocation voted that degrees ought to be granted to women; but the Senate, the governing body, refused. The objections urged may be ranged under two heads.

1. It is said the strain necessary for passing the examination would be injurious to health. The law forbids suicide—to allow, to encourage women to compete for degrees, is to invite them to self-destruction.

To this first argument it may be answered (*a*) That rational beings must be trusted to decide what is most for their good, and that people generally know their own interests best. That women are prepared to adduce arguments to prove their wish no unreasonable one. (*b*) That if the taking degrees is beyond their strength, it is not the province of a University to establish precautions for the maintenance of women's health, but to test intellectual ability and acquirements. That to prevent women from injuring their health by over-study would be like shutting the park gates to keep out the crows; in fact, one might use nearly all the arguments of the Areopagitica. (*c*) It may be urged that study on the whole promotes health; and if a few women, fired by ambition, should injure themselves by over-study, they are not alone in this, nor indeed more prone to such a crime than men; that if study slays its

tens, idleness and frivolity slay thousands; that an uncultivated mind is especially liable to become the prey of unchecked emotions, and emotions exhaust the system more than intellectual work. Worry and anxiety, too, wear out the frame, and many women have broken down whilst making ineffectual efforts to support themselves and others. Already the improved education of women has lessened the difficulty. University certificates have raised the value of women's work in teaching; and if degrees were granted, they would be still further raised above the cares and privations which undermine health far more than study does. Lastly, it can be shown that where the granting of degrees upon a large scale has been tried, the health of the graduates, and the average duration of life, has been above the average. There are now forty-six colleges in America, where the education of the students, men and women, is carried on together. The publication of Dr. Clarke's book has led to the compilation of a mass of statistics, which have been published in a little book called, 'The Education of American Women.' We cannot here do more than allude to the grounds of evidence—the subject is there treated exhaustively in a series of essays. Taking the average of death-rate of graduates for thirty years in seven large colleges for men, and comparing it with one of the largest female colleges, Holyoke—a college which has graduated nearly fifteen hundred students—we find the percentage of graduates who have died in the interval stand thus:—Holyoke, 10·39; the others, 10·12, 11·26, 11·52, 11·85, 12·34, 13·42, 16·83 (these numbers exclude all who died from war), *i.e.* the life of the women graduates is longer than that of the men graduates from six out of seven of these colleges. The attendance list shows, too, that the absence from lectures of the women students in most colleges differs only by a fraction from that of the men. And that the women graduates are, in after years, generally more healthy than others is confidently affirmed by many; one cause assigned being the attention that is usually paid to physiology and the laws of hygiene by the resident physician—instruction being always given on these subjects. Many bear testimony to the gradual improvement that is generally seen in each year of college life; there are also statistics of this. We read of the diminution of nervous headaches, the almost total disappearance of hysterics. 'These,' writes an experienced teacher, 'are born of silly mothers and fashionable follies, and I find them easily cured by equal doses of ridicule and arithmetic.'

We can, of course, give no direct testimony as yet to the health of graduates in England; but I remember the outcry

raised when it was proposed to open the local examinations to girls. The deed was done, and none of the evils predicted have yet fallen on us. More than fifty of our students have passed University examinations, and not one, as far as I know, has suffered at all in health. I frequently challenge visitors to find a delicate-looking girl amongst our students. I do not say that we have none, but there are so few that it is not easy to find them. I kept one year a record of all the causes of absence, and found that in the higher classes pupils were absent from illness on an average about three days in a year, in the lower from five to six, and in the lowest rather more. 'There is no tonic in the pharmacopœia,' writes Mrs. Anderson, 'to be compared with happiness, and happiness worth calling such is not known where the days drag along filled with make-believe occupations and dreary sham amusements.' But this objection on the ground of health is not the only one made.

2. It is said, Admit women to professions, and they will enter into competition with men, and render life still harder for them. And in the fierce struggle of life, all gentle and womanly qualities will be destroyed; the foundations of social and family happiness will be undermined; women, instead of being content to be helps meet for man, will force their way into public life.

First, we answer, that if good work is done, the community as a whole must be thereby gainers; and, secondly, that though women may diminish the earnings of some men, they may relieve others of heavy burdens. Many a father toils early and late to provide for the present and future of grown-up daughters, and scarcely sees the suburban villa to which he returns late and worn-out to find his daughters worn-out too—but with idleness and ennui. Many a brother has been taxed to provide for a sister. Take from men the burdens they need not bear, and the strain, now so unequal, will be diminished. Unmarried women without property must live, and the question is, Shall they do so by their own work, or by that of others? Besides, if women earned for themselves, they would know more of the value of money; and if they were occupied they would spend less time in the expensive amusement of shopping. Again, even supposing (which I deny) that men will suffer, if the surplus women, who have not domestic duties, are allowed to enter professions, can we say it is just or generous to refuse to a woman who is qualified for a degree, the witness that she is so qualified, lest she should in earning an independence diminish the earnings of some men?

Lastly, is it good that, at least in our modern society, un-

married women should be dependent upon the earnings of others? Is it good for a girl to feel, as she often does, that she is a burden of which her family would gladly be rid? In the interest of morality, of domestic happiness, it is not good.

As regards the idea of a similar education and examinations turning women into men, and depriving them of all grace and gentleness, this has no basis either in reason or in fact. 'Ingenuas didicisse fideliter artes, emollit mores,' is true of women no less than men. 'Without controversy learning doth make the minds of men' (and women too) 'amiable and pliant to government, whereas ignorance makes them churlish, thwart, and mutinous.' 'It is not,' writes Mr. Bryce, 'to refinement and modesty that a cultivated intelligence is opposed, but to vulgarity of mind, to the love of gossip, and the love of dress.' 'It is not true,' says Mr. Fitch, 'that the studies, which are supposed to elevate and refine men, have an opposite effect on the other sex; but though grossly untrue many believe it. The finest manners I ever saw among young people, the most perfect modesty and freedom from affectation, were in a class of girls brought to me to demonstrate a proposition in Euclid.'

Lastly, if there be in this movement anything contrary to the laws of God as revealed in woman's mental constitution, 'it will come to nought.' Those who are now so anxious to climb the highest peaks will faint ere they have reached the *pons asinorum* or the *mauvais pas*, and descend into the valley with a truer idea of their own powers. There is nothing like a wholesome dose of experience for making fools wise—let them have it!

I have advocated the opening of degrees to women on the grounds of justice and expediency, but at the same time I think the preliminary examination, followed by one for certificates, more suitable than the degree examinations as they now stand. Few can command the time and money requisite for a three years' preparation. It is absurd to say a girl of good ability could not, between eighteen and twenty-one, prepare for the B.A. degree; but she could not, any more than her brother, if subject to the constant interruptions of domestic life. We cannot blame anyone for spending more on the education of a boy, seeing the chances are (to say the least) even, that a girl may marry and give up her profession. On the other hand it is, or ought to be, possible for a girl to get a few quiet hours each day for self-improvement—enough to read up one special subject—and her health, efficiency, amiability, will all benefit by this.

My second reason is, that the mature mind should have full

liberty to choose its own subjects, and that the degree examinations tend too much to uniformity. Why should we compel one who is devoted to mathematics to spend half her time in studying Greek? If, therefore, we must choose between degrees and certificates, I should prefer the latter. Is there any reason why both should not be attainable? or might there not be a combination of the two? Might not women (and men too, if they like), after taking at their leisure a certain number of certificates, be allowed to claim a degree? The successive efforts would be less than that required for taking many subjects at once, but surely the same amount of study distributed over more time would be equally beneficial, and the knowledge quite as likely to be retained; a higher and more thoughtful treatment might in that case be demanded, and all risk of overwork avoided. Those who require degrees early would not be hindered from taking them as now, and the fees for an examination in detail should be made higher than for one divided into three or more groups.

The Professional Training of Teachers.[1] By William Jolly, H.M. Inspector of Schools.

THERE is one kind of Technical Education that has been strangely neglected, to individual and national loss, the training of our educators in the principles and practice of the work they have to do. We provide practical training for boot-making and boat-building; we believe in the need of training for all handicrafts, however humble; but we have deemed no training necessary for the highest and most difficult art of all, the moulding of the human being, the evolving of intellect and character. We have thought, at least we have acted as if we thought, that 'the unfolding of a human being in body and mind is so comparatively a simple process that any one may superintend and regulate *it* with no preparation whatever,' instead of being, as Herbert Spencer[2] most truly says, 'with one exception, more complex than any in nature,' and a task 'of surpassing difficulty.'

But the subject begins to receive increased attention. It begins slowly to dawn upon us that Education is a Science based on the facts of the human constitution and on the laws that regulate its development; and an Art which is the appli-

[1] See *Transactions*, 1872, p. 259; 1873, p. 83.
[2] 'Education' (Williams and Norgate, London), p. 31.

cation of these principles, and which requires, at the least, as careful preparatory practice as lower crafts. It begins slowly to be realised that education should remain no longer the empirical unsystematic process that it is; and that experience possesses no such magical power in this art as to give all the science and practical skill that are required in this pregnant work, as has long been and still is maintained by those that should know better. It begins slowly to be surmised that our educational system is not the perfect thing we have, in our insular self-sufficiency, fondly deemed it; but that it is the growth solely of tradition, and not the result of scientific investigation into the being to be instructed, and is consequently very defective in matter and method; and that it requires the light of science shed on it, as much as astrology and alchemy did before they were transformed by scientific principles into astronomy and chemistry. It begins to be realised, in short, that our educational system demands reform, and that it would be our wisdom and our interest to prepare our teachers for the difficult and critical duties they have to perform to our children and the nation.

My aim, in now bringing this subject before the Association, is briefly to state what has been done and what yet remains to be done in this most important subject, in order, if possible, to lead to practical action on the part of the Social Science Association.

'The imminent question is,' says Dr. Youmans,[1] 'how may the child and youth be developed healthily and vigorously, bodily, mentally, and morally? and science alone can answer it by a statement of the laws on which that development depends.' 'A knowledge of the being to be trained,' he well puts it,[2] 'as it is the basis of all intelligent culture, must be the first necessity of the teacher. Education is an art, like locomotion, mining, or bleaching, which may be pursued empirically or rationally, as a blind habit or under intelligent guidance; and the relations of science to it are precisely the same as to all the other arts—to ascertain their conditions and give law to their processes. What it has done for navigation, telegraphy, and war, it will also do for culture.' 'Grant,' says Herbert Spencer,[3] 'that the phenomena of intelligence conform to laws; grant that the evolution of intelligence in a child also conforms to laws; and it follows inevitably that education cannot be rightly guided without a knowledge

[1] 'Modern Culture' (Macmillan, London), p. 356.
[2] *Ibid.* p. 354.
[3] 'Education,' p. 29.

of these laws. To suppose that you can properly regulate this process of forming and accumulating ideas without understanding the nature of the process is absurd.'

The wisdom and need of making provision for the preparatory training of teachers is surely therefore most imperative. Yet we have made no provision for the education of teachers as a class in the science and art of their work. A certain number of our elementary teachers have received a little of this training in our Normal Schools, in certain portions of the subject known as 'Method'; all the others, who could not or would not attend these training schools, have received no training whatever, and have gone to their work so pregnant with gravest issues, without one hour's instruction in the nature and practice of the work they have to do, compelled thus to 'grope their way to some knowledge of these at the expense of several successive generations of children.'[1]

The universal training of teachers in the principles and practice of their work has recently received increased attention, and there are most hopeful signs that a few years will see a thorough training system established in Scotland for all teachers. The important question of how and where such training should be given seems in the way of receiving a final answer in this country, viz., *That it should be conducted in and by our Universities.* Personally, I am convinced, on many grounds, that in Scotland no other training will be sufficient for or worthy of the work. I have elsewhere[2] repeatedly given my reasons for this opinion, and recently, in the September number of the *Fortnightly Review.* No other training will be high enough in status and broad enough in character: no other will be able to command the attendance, and make provision for the thorough training of the whole profession; no other will deliver our teachers, who ought to be an incorporated and vital unity in training and work, from the divisiveness of caste and sectarianism which denominational training cannot but perpetuate and increase; no other will raise the despised and ill-paid profession of teaching to its true position beside the more favoured professions of medicine, theology, and law.

In thus providing professional training for our teachers in our universities, we but restore to those institutions the profession they themselves created, as pointed out by Dr. Lyon

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[1] 'Contributions to the Cause of Education' (Longmans, London), by Professor Pillans, p. 36. The whole passage should be read.

[2] In *Education Blue Book* for 1872-73 and elsewhere. See *Schoolmaster* of Sept. 27 and Oct. 25, 1873, and Sept. 26, 1874.

Playfair,[1] and supply a patent want in our university curriculum, a want which curtails the usefulness of our universities and causes a loss of influence and emolument. Other wants in our universities, raised by the increasing intelligence of the age, are being rapidly and generously supplied. What has been the history of our universities from the first, but a striking history of the representation of new ideas within their walls to meet advancing thought? Take our Scotch metropolitan university as an example. At first, Edinburgh College was nothing but a higher boarding school for the humanities, with two or three classes under the regents, in which the students were all resident, as in our first Normal Schools. Its history has been one of continuous expansion, by the establishment of professorships of other subjects, which would have astonished, if not roused the opposition of, the dignified and exclusive, but learned old regents. Its growth in this view has been most interesting and instructive, and affords a kind of photometric indication of the advance of intellectual light in the country. English literature, after long efforts at stamping out by the humanitarian exclusionists, becomes recognised as worthy to take its place with the languages of Greece and Rome, and the chair of English Literature is established in 1762. Even manure should be spread by philosophy, and a chair of Agriculture is founded in 1786. The Sacred Book itself becomes subject to the general laws of critical investigation, and the Chair of Biblical Criticism is established in 1846. And so, as knowledge advances and widens and systematises itself, new representatives of special departments find admittance into college halls, and we have professorships instituted, in succession, in the university, of philology, music, astronomy, botany, engineering, history, geology, and commerce. The history of all our universities has been the same recognition and representation, by collegiate instruction, of progressive branches of thought and inquiry.

What is *our* duty, in view of such an honourable history? Surely to help to prolong this ever lengthening line of progress, by the foundation of new chairs to represent new thought and supply new wants of the age. And of these wants, I venture to say, there is none more clamant than Education.

The training of *all* teachers, both elementary and higher,

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[1] In his admirable address to Graduates' Association of St. Andrews in London, in Dec. 1872. See Athenæum of Feb. 16, 1873.

in our Universities presents none of the difficulties in Scotland that would seem almost insuperable in England. In England, there lies a 'gulf fixed' between the elementary schools and the universities that would seem well nigh impassable. In Scotland, no such chasm exists. Our common schools have always had a direct connection with our universities, and these together have supplied an easy highway to the highest learning and distinction, alike to the peasant and to the peer. Our educational system has always been truly republican in character, and has been, happily for the country, little tainted with caste and exclusiveness. Our universities have always maintained the position of being the highest schools of the country, open to the whole people, and not reserved for privileged classes as in England. The smallness of our territory also renders the establishment of university training machinery for teachers comparatively easy of accomplishment.

The necessity and wisdom of this *University* training of teachers has been generally acknowledged, during the recent agitation of the subject, by teachers themselves, the press both public and professional, and the universities, and by most who have given attention to the subject. The precise nature of the training machinery required may be matter of discussion, and the difficulties arising from the relation of the existing Normal Schools to such university training may be more or less formidable; but it begins to be generally acknowledged, that justice will never be done to teaching till its members are educated alongside of other professions, not more necessary to national well-being, not more deserving of national honour and support, and not more entitled to professional training in our great national schools, the Universities.

Besides, by furnishing such training, our universities would serve themselves as well as the profession, and would take the position in education, as the educational centres of the country, which they ought to have, and which they will show their wisdom in taking active measures to secure. A Chair of Education efficiently filled would disseminate higher and truer views of education, and would seek and welcome, from all quarters, the best lights on the great subject, and fearlessly propound them; and thus our universities would become the great centres of educational inquiry and influence in the country that they ought to be.

It will be interesting and instructive to note the efforts that have been made towards realising this University training of teachers, and to point out the present state of the

question, for the information of those outside of professional circles.

Professor Pillans, an honour to the profession of teacher to which he was proud to belong, and a pioneer in educational thought, many of whose ideas still wait for certain recognition —Professor Pillans, as far as I can ascertain, has the merit of being the first to perceive that our universities are the only proper and efficient training ground for our teachers. In 1834[1] he recommended the institution of lectureships, but later he advocated the foundation of Chairs of Education at each of the Scotch Universities. He made a codicil to his will leaving 5,000*l.* for a Pædagogic Chair in Edinburgh, and, in 1862, went to London to advocate the subject before Government, and to solicit supplementary aid from the Education Department; but his enlightened efforts were met with opposition and condemned by ignorance, which unfortunately caused him to withdraw his proffered endowment. Lord Brougham, at the same time, wrote a letter recommending the idea to Government, and warmly approving of Professor Pillans' design, when he made his unsuccessful mission to Mr. Lowe, who, though Minister of Education, did not believe that there was such a thing as a science of education, and refused to grant public money for any such purpose. Happily, Mr. Lowe's successors in office have been more enlightened.

At the foundation of the Educational Institute of Scotland in 1847, the establishment of such chairs was put down as one of its most important objects, and in 1858 a proposal was issued by the Institute for the foundation of one chair, and an attempt made to raise the funds from teachers themselves, but nothing came of this honourable endeavour. In 1864, Dr. Donaldson recommended the foundation of such chairs in a professional journal then in existence, called *The Museum*, in an article recently published along with others in a volume called 'Lectures on the History of Education.'[2] The subject was repeatedly discussed in the same journal.

The College of Preceptors has for years been agitating in the same direction, and had the distinguished honour, three years ago, of appointing the first Professor of Education in the British Empire—Professor Payne, whose efforts to raise and systematise the principles of education deserve all praise,

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[1] In an article in the *Edinburgh Review* of July 1834. See 'Contributions to Cause of Education,' p. 129.

[2] 'Lectures on the History of Education' (A. and C. Black, Edinburgh), p. 167.

and whose classes have been and still are most successful. They recently passed a unanimous resolution which shows that their late effort in appointing Professor Payne is not their final one; 'that the institution of Professorial Chairs of the Science and Art of Education, *in each of our universities*, would be a most valuable measure, and ought to be pressed upon the attention of the Government and of Parliament.'[1] The College of Preceptors has steadily and earnestly watched the progress of the movement in Scotland, and repeatedly passed resolutions in its favour.

In 1872, at a conference of the headmasters of England at Birmingham, the subject was well discussed, by such men as Dr. Abbott of London, and Dr. Butler of Harrow, and resolutions were passed, pressing the subject on the attention of the universities. At subsequent conferences, the same views have been strongly advocated.

The opinions of eminent educationists in the country are equally strong as to the wisdom and necessity for such university educational training. The first Report of the Endowed Schools for Scotland contains abundant testimony to the same effect from the most competent witnesses, Dr. Lyon Playfair and Professor Hodgson being specially noteworthy.

In September of last year, the subject received new and strong impulse at the annual meeting of the Educational Institute in Edinburgh, on account of a memorial on the subject presented to the Institute from a large meeting of the northern teachers at Inverness, a memorial which Professor Hodgson quoted in full, in his admirable address at Norwich last year, when President of this section, as one that 'well deserves to be read and put on permanent record,' and which is published in your Transactions. The subject was warmly received in the Institute, and resolutions were cordially adopted, recommending steps being taken towards raising funds for the foundation of a Chair by Scotch teachers themselves, and an influential committee was appointed to see this carried out, and to further action on the subject.[2]

The proceedings of the Institute have been fully commented on by the public press, both metropolitan and provincial, and the institution of Chairs of Education advocated on the ground of their desirability and justice, the *Scotsman*, amongst others, declaring that the want of professional training

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[1] At a meeting of the Council of the College in November last, a resolution was unanimously passed to endeavour to raise subscriptions to endow the Professorship. See *Educational Times* of Dec. 1.

[2] See *The Schoolmaster* of Oct. 27 and Nov. 20, 1873.

for teachers is 'almost a scandal.' Professional journals have most vigorously and repeatedly pleaded the same cause, the *Educational Times* and *The Schoolmaster* deserving special commendation for their persistent advocacy of the subject.

At the meeting of this Association at Norwich last year, Professor Hodgson, after referring to the action of the Educational Institute, spoke earnestly in its favour.[1] Principal Shairp, in his admirable address to the students at the opening of St. Andrews University last year, eloquently advocated the same kind of training for teachers. After some excellent remarks on the nature and necessity for a professorship of the theory and practice of teaching, he informed us that ever since the new Education Act came into operation, St. Andrews University had had this matter under serious consideration, and that whatever steps the Institute proposed to take for this evil, he ventured to assure them that they would find, from the members of that university, willing co-operation. In the same speech, he indicated the true attitude that should be taken by our universities in regard to this subject. He rightly observed, that 'it would be a gain to our universities to have the education of our future schoolmasters committed to them,' and that 'to educate the future educators of the country not only up to the past standard, but to the still greater level, of intelligence which modern needs require, this alone is a work second to none in importance.'[2]

In April last, the Bell trustees, who have the management of the large funds left for educational purposes by Dr. Bell, the founder of the 'Madras' system of education, and of the Bell's Schools in Scotland, offered 6,000*l.* to the University of Edinburgh, and 4,000*l.* to the University of St. Andrews, for the foundation of Chairs of Education at these universities. In order to increase the endowments, the authorities of these colleges determined to apply to Government for assistance, and an influential deputation waited for this purpose on the Chancellor of the Exchequer. Sir Stafford Northcote referred them to the Lord President of the Council, who recognised the great importance of the movement, but referred back the subject to the universities, to frame a joint scheme for all the Scottish universities, and by the deputation that he would give such a scheme a favourable [illegible]

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consideration.' During these conferences with the Government authorities, the subject was well stated and advocated by different members of the deputation. Since then, a committee has been appointed by the universities, and is now engaged in framing the scheme asked for by the Duke of Richmond.

In this university action, Edinburgh and St. Andrews have taken the most active part; St. Andrews, however, having anticipated Edinburgh in the good work. Aberdeen has since then spoken decidedly and clearly in its favour, and is now moving in the matter. In the report of a committee on the institution of new Chairs submitted to the University Council in April last, the first Chair in importance, as also the first in time, that was recommended, was a Chair of Education; Professor Struthers, who presented the report, saying that he looked on this Chair 'as a most important one, and that the necessity for such a Chair was clearly obvious, and required no enforcing at his hands.'[1] Glasgow University, so far as I have seen, has not yet given any utterance on the subject, although the Glasgow press has been advocating it to some extent. I have no doubt, however, that the practical sagacity of the commercial capital of Scotland will perceive the necessity and value of such technical training for this most difficult of crafts, and the wisdom of having it conducted within the walls of her beautiful college; and, with her accustomed brilliant generosity, will found such a Chair with the amplest endowments and the finest practising machinery.

During the past year, local associations of teachers have discussed the subject, and almost unanimously acknowledged the desirability and need of the same university training, and of practical effort by the profession towards securing it in all our universities.

At the meeting of the Educational Institute held last month, under the presidency of Professor Hodgson, the same subject formed a special part of the business. It received special advocacy in the able address of the retiring president, Mr. Macdonald of the Edinburgh High School. A Report by Dr. Donaldson, the convener of the committee on the Chairs, was given, the committee was reappointed with instructions to convey the thanks of the Institute to the Bell trustees for their handsome and enlightened gift, and to secure the representation of the profession, through the Institute, in the conferences on the joint scheme required by the Lord President of the Council. I am sorry to say, however, that a motion

[1] *Aberdeen Free Press*, April 16, 1874.

recommending that steps should be taken by the Institute towards raising, during the ensuing year, the necessary funds from teachers themselves for a Chair in one of our universities, was lost for one of a milder character, referring back the whole subject to the standing committee to watch progress and continue their exertions. This vote, I have no doubt, is one merely of delay and not one of lethargy or indifference to the subject. I am convinced, that it is only as teachers prove their belief in the importance of the professional training they seek, by founding a Chair themselves, as has been abundantly shown, they could do with ease, that Chairs in all our Scotch universities will ever be founded, at least with anything of the speed which the importance of the subject demands.

This brings the history of the movement in favour of University professional training for teachers down to the present month. The progress made during the past year has been both surprising and gratifying. Public and professional interest has been roused in regard to the subject; a donation of 10,000*l.* has been offered; the matter has been brought before Government, to secure if possible their co-operation and assistance; the public press, professional journals, and several of our monthlies have repeatedly urged its importance; and committees are now sitting —one of the Educational Institute, to watch over and foster the movement, and another of the university authorities, to frame a joint scheme for pædagogic chairs at all our Scotch universities.

With the assumption of the important function of being the centre of direction, control, and inspection of the national educational system, Government becomes bound to the performance of certain educational duties. And of these duties, the first in importance is, undoubtedly, the technical training of our educators in the principles and practice of their work. The duty ought to have been the first in time, at least coincident with the establishment of the national system; but this duty the recent Scotch Bill of 1872 forgets or ignores. It is for those interested in education to endeavour to rouse Government to a sense of its duty in this vital part of national education, to make the technical training of our teachers an indispensable accompaniment, though it cannot now be, as it should have been, an indispensable condition of a national educational system. The deputation from the universities craving Government assistance for this purpose was a praiseworthy attempt to make our rulers realise the part they ought to take in this important work. During the past year, a petition has been drawn up by the Institute for presentation to Government, in favour of

such assistance, and this has been already extensively signed by teachers, and will yet be signed by most of the body.

Pressure from other quarters should also be brought to bear on Government, in support of this just claim for assistance in securing this, the vital heart of any truly efficient and national educational system. And there is, surely, no more important or appropriate work for the Education Section of this Association, than to add its voice in favour of the same wise and just demand. I beg, therefore, to suggest to the Association the formation of a permanent committee from among those of its members who are interested in education, to aid this important movement now begun for the University professional training of our teachers, to watch over and foster its progress, and to take active steps towards bringing it to a successful issue. I beg also to suggest, as one of the first acts of this committee, that a deputation of influential educationists and others should wait on the Lord President of the Council, in the same way and with the same aim as the deputation from the universities, to urge the duty of Government to grant such assistance, as the head and centre of national education in Scotland.

I think it most important that Government should receive the concurrent testimony of all enlightened educationists to its duty to education in this respect. Even if Government held no such important relation to national education in Scotland as it does, it would be bound in justice to grant assistance for the Education Chairs; because, as has been already pointed out, it has already given assistance to several other Chairs in our Scotch universities. But the claim for such assistance to the Educational Chairs becomes irresistible, and we should think cannot be put aside, with the assumption by Government of the central functions and powers in a national educational system.

With the foundation of Chairs of Education in Scotland, the example would be set and the way prepared for the foundation of like Chairs in the English universities. In England, as already said, the difficulties in the way of such foundations are much greater than in Scotland, where the work is comparatively easy, and where large progress has already been made. But there is no surer earnest of the supplementing of the present imperfect curriculum of our English universities by the foundation of Educational Chairs, than by their foundation in the sister country, where their foundation is possible and easy, and where it is already in near prospect.

It should be one of the aims of the Educational Institute,

and of the more enlightened and earnest men amongst our *teachers*, to rouse the profession in general to a sense of their duty to themselves, by the establishment of one of the required Chairs, through the combined efforts of the whole profession. Teachers have now an opportunity open to them, for the first time in the history of the country, of commanding a position in society and its resulting benefits, such as they have never yet occupied. Education, with the wise, earnest, and united endeavour of the whole profession, could now and should now take possession of her birthright. She ought now to assert her rightful position to stand side by side with other sciences and other professions, not more noble and not more useful and important. She has too long been the Cinderella of all other professional pursuits, doing all the hard drudgery, and acting as lowly purveyor for her grander and better attired sisters. She is as well born as they are, and she deserves as kindly attentions, as fine clothes, and as much pocket money as they. But she has been treated as underborn or bastard by her kin, who have nevertheless been ready to avail themselves of her valuable and willing services. But the day will come—why not now?—when she will be hailed by the country in her true character, as necessary for its advancement and happiness, and be treated as her birth and goodness deserve! And there is no easier way of achieving this, their rightful influence, emoluments, and status, than by one great and combined effort to establish one Chair of Education, and thus to secure their being trained amidst the same elements of higher learning and culture, and on the same social level with the other professions, amidst the time-hallowed associations and elevating influences of our ancient universities.

But the Country requires also to be awakened to the vital interest and important stake it has in this great question. Education and the technical training of our educators are not mere professional matters; they are questions of national importance, and the whole people must be aroused to a knowledge and conviction of the evil, the perversion, the disease, the unspeakable damage done to their children, by ignorance and incompetence in the sacred and difficult work of the education of their children. This aspect of the subject is not realised. If it were realised in one tithe of its truth and importance, the country would not and could not remain so dead to its interests, well-being, and honour in this matter, as it does —with such detriment to be avoided, and such inestimable good to be attained. Were the nation convinced, even in a small degree, of the truth in this matter, no sacrifice would be too

great, no effort too gigantic to guard our children against such wrongs; and the centre and source of health and cure in this educational work lie in the thorough training of teachers in the science and art of their work, in enlightened and generous measures to secure the most earnest, the most cultured, and the most skilful artists for the matchless work of unfolding the minds and characters of their children. I have elsewhere pointed out in detail[1] how the country, through its School Boards, with a trifle more of school rate, could found one of the required Chairs of Education. It would be one of the aims of the permanent committee of the Association which I propose, to endeavour to rouse the people to a sense of their duty to themselves and to the teachers on this subject, through speeches, meetings, pamphlets, and other means, as they may best determine. It is a great and inspiring work for any association to set before itself to do—being no less than to help to create a new epoch in our educational history, when our people will be awakened to a knowledge of what education truly is and to an active interest in the vital work of the education of their children; and when education shall cease to be the empirical, imperfect, and more or less detrimental thing that it is, and shall become enlightened, scientific, healthy, and universal; developing in symmetry and harmony the whole of the wonderful faculties, physical, intellectual, emotional, moral, aesthetic, and spiritual, that form the priceless inheritance of every human being. And it cannot be too clearly and too early realised, that the *first* practical step towards the higher and more perfect education of the future is the thorough training of our teachers—by whom our education is conducted and through whom alone it can become what it ought to be—in the principles and practice of their work, according to the best and growing lights of the time. *There is no other way*—and this cannot be too often repeated. We begin to realise, and to act on the conviction, that we can only raise our arts and manufactures by technical instruction in their theory and practice. And if this is true of the lowest arts, surely, it is much more true of the highest art of all, that of the educator. If preparatory technical instruction is necessary to improve our manufactures, surely like technical training is much more needed to improve our education. If it is necessary for silk, it is surely necessary for the soul; if it is needed for the sculpture of a marble bust, surely it is much more required for the moulding of the human spirit.

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[1] In the September number of the *Fortnightly Review*, for 1874.

On the Expediency of the Introduction of Tests for Physical Training into the present system of Competitive Examination for the Army, Navy, and Indian Civil Service. By HENRY WOODROW, H.M. Senior Inspector of Schools, Bengal, and formerly Fellow of Caius College, Cambridge.

THE last report of the Civil Service Commissioners shows that during the eighteen months ending January 1, 1874, 25,322 candidates for the Public Service, Civil, Military, and Indian, were examined by the Commission. This large number represents a much larger number of future candidates who are still under training, and it is therefore probable that upwards of 50,000 young men are influenced in their studies by the standards of Competitive Examination. The number actually selected for the public service in any year may be small, but the number whose training is influenced by these examinations is very large. On the one hand, it is important that the unsuccessful candidates, the overwhelming majority of the whole number, should spend their time in studies and pursuits useful in their future career of life; and, on the other hand, it is essential for the welfare of the nation that the candidates selected should be fitted in every respect for the work they will have to discharge.

The number of public servants appointed through that system increases every year. Two-thirds of the members of the great Indian Civil Service have been selected by competitive examination. The officers of the cavalry, artillery, infantry, and commissariat are now similarly chosen. In the course of a few years the great body of officers in our army and navy will have been selected by competitive examination.

It is impossible to over-estimate the importance of selecting for these services men in whom the nation can entirely confide, and who are above the ordinary type in moral, mental, and physical endowments. These qualities are arranged in the order of their importance. But how can competitive examination test moral qualification? Certificates of good moral conduct are indeed required, and medical testimony is referred to by the Commissioners. It is hard to say how their inquiries could be pursued further.

The early supporters of competitive examination were well aware that moral qualifications could not be tested by papers of questions. They knew that the State needs in its servants

such qualities as honesty, sobriety, common sense, sound judgment, discretion, tact, courtesy, high sense of honour, courage, power of command, &c., but they argued that these qualities were as likely to be found associated with mental superiority as dissevered from it. The same assumption was made concerning physical efficiency. Mental qualification only was submitted to the test of examination. Hence, scarcely one-third of the qualifications required in the public servant were tested, and efficiency in the other two-thirds was assumed. This is not only a serious injury to the public service, but has unduly restricted the beneficial influence of the system, by leaving to chance the possession of qualifications that increase the worth of an officer, and that might be ascertained with certainty. It may be granted that nothing but real work can test moral qualification, but the possession of physical efficiency ought not to have been assumed. It can be tested as readily as mental qualification, and it has been so tested.

The two objects of this paper are—first, to describe the competitive examination in physical training which was introduced by Sir George Campbell into the system of selection for the subordinate Civil Service of Bengal; and secondly, to urge the expediency of its extension to the competitive examinations in London for the higher Indian Civil Service and for the Army and Navy.

In 1872 Sir George Campbell, the then Lieutenant-Governor of Bengal, issued instructions for the establishment of Civil Service colleges. The standard on admission to the colleges was that of entrance to the University of Calcutta, which is about on a par with the matriculation standard of the London University. A knowledge of one of the vernacular languages was necessary.

In these colleges instruction was ordered to be given in riding and gymnastics, in surveying and drawing, and in law and modern science. The choice of subjects was dictated by the political necessities of the country. It had reference to the requirements of the public service, to the previous training in schools, and to the physique of the people.

The Lieutenant-Governorship of Bengal contained till lately the provinces of Bengal, Behar, and Orissa, the valley of Assam, 500 miles in length, and the hill tracts of Chota Nagpore on the west, and of Chittagong on the east.

The inhabitants of these several districts differ from each other in language, features, and national customs. I may mention here that India contains nations as distinct in language and customs as the nations of Europe, and this fact

explains how it happens that a description of the national customs in one part of India may be quite inapplicable to another part, and that a statement which is true of one nationality may be untrue of another.

Bengal, Behar, and Orissa, with their outlying dependencies, contain an area of 248,000 square miles, and a population of 66,500,000 inhabitants. The Bengali language is spoken by about half this population; Hindustani, or Hindi, or Uriya, or some other language, is spoken by nearly all the remaining half; English is not understood by even 1,000,000. Hence the necessity of insisting on a knowledge of some vernacular language.

The climate, owing to the numerous rivers and sheets of water in the delta, is damp, sometimes even to saturation. The country also is hot, lying as it does partly within the tropics. Heat and moisture form a vapour bath in a considerable portion of Bengal during the months of July, August, September, and a part of October. Such a climate is prejudicial to the development of muscular fibre, and the majority of the Bengalis have, in consequence, a feeble physique. As they hold their own among the nations of India, though for a thousand ages they have been a conquered people, the Darwinian theory would lead us to suppose that they make up in intellect for their deficiency in physical strength, and such indeed is the case. They cannot compete with the stalwart men of the North-Western provinces in thews and sinews, but they are vastly superior to them in brains. For sedentary work, requiring intelligence and steady application, there is no nation in the world superior to the Bengali. Sir George Campbell determined that in the Civil Service colleges those subjects should be taught in which the Bengali was least efficient, and consequently attention was given to gymnastic exercises, by which physical strength might be developed.

Supervision is good for every man, though it is not much liked. It is especially needed in Bengal, where public opinion, except in the large towns is weak, and where an official of feeble physique is tempted to neglect duties which require active exertion, exposure to the sun, and the endurance of fatigue. In a country where roads are few, adequate supervision over subordinates would imply the power and will to see them at their work, as well as the ability to test the quality of the work. The head of a district should therefore be ubiquitous, for if he stays at his desk he may be certain that duties will be neglected by his subordinates.

Sir Alexander Grant said that an inspector of schools

should be able to ride, with ease, his twenty miles before breakfast, and do a hard day's work after that meal. In the discharge of my work as an inspector of schools I have had to ride, without resting, a distance requiring five relays of horses; but if this power to withstand fatigue is requisite for an inspector of schools, it is even more requisite for magistrates, whether subordinate or chief, entrusted with the administration of a district.

In India false evidence is constantly fabricated, and intelligent natives are lost in astonishment that our courts of justice should depend so much on the statement of witnesses whose trade is perjury, and so little on the evidence of circumstances which cannot lie, and on trustworthy information obtained by the judge or jury out of court. If a riot, murder, or burglary occur in a district, the investigation by the police superintendent or the magistrate should be prompt and on the spot, or justice is likely to miscarry; yet such an investigation can be made only by an officer who is a good horseman. The delay that arises in collecting men to carry a palanquin for forty or fifty miles gives time to the interested parties to hush up the matter, or to direct inquiry into the wrong channel; hence riding is an essential qualification for the public servant in India, and Sir George Campbell marked it as one of the subjects to count in the competitive examination.

A committee was appointed by Sir George Campbell in 1872 to arrange the details of his plan. It consisted of the Secretary of Government, the Hon. Charles Bernard, the Principal of the Hooghly College, Mr. R. Thwaytes, and the Director of Public Instruction, in which appointment I was then temporarily officiating. Our first scheme was somewhat too elaborate and expensive for immediate adoption, but it was modified, and the college classes opened in July 1872.

No greater innovation on established notions could be conceived than an examination for Bengalis in riding or gymnastics.

Bengali gentlemen, some years ago, thought it derogatory to their dignity to ride or even to walk any distance. In a great school near Calcutta an application was once made to me for the dismissal of the schoolmaster, because he ridiculed some boys by asking them whether they had feet like Chinese ladies. It appeared, on inquiry, that the boys said it was ungentlemanly to incur fatigue, and that no one but a coolie would walk three miles.

Such were the notions current fifteen years ago, but they have gradually given place to more healthy ideas.

His Excellency the Viceroy, and the Lieutenant-Governor went to Hooghly to see the progress which had been made in the experiment, and were astonished at the success attained. The gymnastics were done really well, the riding was fair, and the feats of vaulting and of climbing the loose rope would have been creditable even to English athletes. In 1873 the award of marks for riding and athletic exercises was determined satisfactorily. The list in order of merit was brought out, and for the first time in India, perhaps even in the world during modern ages, physical training counted with mental attainments in determining a candidate's place among the competitors for Government service. The examinations in 1874 were likewise successful. Sir George Campbell, in his Administration Report of the Government of Bengal, thus describes the object and progress of the scheme (Report for 1871–72, page 80):—

'The Lieutenant-Governor has required candidates for the public service to pass certain tests in addition to the literary tests supplied by the university examination, and by opening the door very wide to many competitors he hopes to obtain a selection of very capable men for high office which will elevate the position of their countrymen.

'The scheme of the examination may be briefly stated as follows:—Candidates receive permission to present themselves for examination in accordance with certain rules as to previous education, service under Government in other capacities, and so on. By every candidate a certificate of character must be produced, as also a medical certificate of fitness for employ in any portion of Bengal. Candidates for appointments of over 100 rs. a month must show that they can ride at least twelve miles at a rapid pace; candidates for inferior posts must have similar qualifications, or be able to walk twelve miles within three hours and a-half without difficulty or prostration. Good character, health, and physical energy being thus secured, the first test applied is to ascertain whether candidates educated in the modern fashion possess an adequate knowledge of English, or, in the case of other candidates, whether their vernacular education is thorough and good. From the English examination all who have passed a university examination are exempt. Then comes examination in those subjects which are compulsory upon all—(1) vernacular, and (2) the elements of drawing, surveying and engineering. Law, elementary botany, and chemistry and gymnastics are optional subjects; but no one failing to pass in law can get an appointment over 100 rs. a month, and no one failing to pass in botany and chemistry

can be appointed to the opium department. The law examination is, in all cases, of a practical character, relating to those branches of the law which are necessary to executive officers, and in the case of candidates for opium appointments is confined to the acts and rules bearing on that department.

'It is announced that candidates who pass these examinations will have a preference for appointments, but they are not promised appointments. A power of selection from among the passed candidates is reserved to the Government and the superior local officers.

'Classes for teaching the prescribed subjects have been opened in the principal schools and colleges, and a Civil Service College has been established at Hooghly. The Lieutenant-Governor, on recently visiting that institution, was much pleased with its progress, and was especially struck by the hearty and successful way in which the native students seem to have taken to gymnastics. He believes that at no school in England could more have been done in that way in so short a time.'

At page 258 the subject is again referred to in these words:—'It had seemed to the Lieutenant-Governor that Bengalis, acute and industrious as they certainly were, had not of late years cultivated those powers of body which are required in a successful executive officer in a country like India. He therefore prescribed riding as a necessary qualification for the higher, and riding or walking for the lower, grades of the native Civil Service. At the first examination, held in February 1872, only twenty candidates passed the Civil Service examination. All these men very shortly were appointed to vacancies in the higher branch of the native Civil Service. For the training of future candidates for these examinations Civil Service classes were opened at the Hooghly and Patna colleges, teaching engineering, surveying, chemistry, botany, and riding. A large number of students and of candidates for the public service at once joined these classes.

'With a view of inducing Bengali students to cultivate their physical powers, and thus to counteract the effect which excessive and unremitting study certainly exercises on a considerable number of Bengali students, gymnasia were opened during 1871–72 at the Dacca, Hooghly, and Patna colleges, and at one or more aided colleges. A teacher of gymnastics was allowed to each gymnasium, who will instruct the students how to make the best use of the appliances which have been furnished. Teachers of riding and ponies for the riding school have been attached to the Hooghly Civil Service classes.'

In the Bengal Administration Report for 1872–73, Sir George Campbell gives further notice of the progress of the experiment to the end of last year. At page 48 he says:—

'The teaching of gymnastics has also been introduced into our colleges and some of our schools with extraordinary success. The Lieutenant-Governor thought that exercises of this kind were of all things best calculated to supply to the Bengali what was most wanting to him, but he hardly hoped that gymnastic teaching would be accepted with much readiness at first. It proves, however, that the Bengali youth have shown a most ready appreciation of, and a real aptitude for, these exercises. Sir George Campbell believes that at no European school could better performers be found, and he is very sanguine that we have discovered the means of inducing these native youths to take a pride in physical energy, activity, and endurance. The Bengali intellect is acute; these physical qualities were the great want, and if such qualities are generally acquired the Bengali race may have a great future before it. For Government employment especially physical qualities are very important, and such qualifications have been much insisted on. There has been some disposition to ridicule the rules which require young candidates for the native Civil Service to ride twelve miles at a rapid pace and in a successful manner, or to walk twelve miles in three and a half hours without difficulty or prostration; but Sir George Campbell fully believes that such tests are good and necessary tests, and that he cannot do a greater kindness to the natives of Bengal than by holding out to them such standards, by which they may gradually fit themselves to emulate Europeans.'

With these extracts I close the description of the establishment of competitive examinations in physical training in Bengal, adding, however, the important fact that the present Lieutenant-Governor, Sir Richard Temple, K.C.S.I., has already evinced an active interest in the encouragement of manly exercises.

But is India the only country of the world in which a good physique is desirable? Or is the subordinate Civil Service of Bengal the only department which is rendered more efficient by due culture of the bodily powers in candidates admitted to its ranks? It is true that the culture of the powers of the body is of less importance than the cultivation of the powers of the mind, but it is not so infinitely inferior as to deserve total neglect.

All the various branches of the army and navy have need of officers competent both in mind and body to carry out the

orders of their superiors. A general in command of an army has less need than his subordinates of strength of arm and vigour of body, but he wants these qualities in his officers and men, and recent wars show that they are not undesirable even in the general himself.

There are many hundred officers to one commander, and to frame the system of selection for the good of the greater number and for the increase of general efficiency is most desirable.

But it may be argued that, conceding all the merits of bodily culture and all the advantages of the ancient ideal of efficiency, 'mens sana in corpore sano,' the cultivation of the physical powers is already more than sufficiently attended to. Candidates before admission must pass a medical examination, and those with any bodily infirmity cannot obtain a certificate. Moreover, the boys of our most important schools and the students of our universities have run mad after athletic exercises—boating, cricket, foot-ball, and such like. The masters of our great public schools want to check rather than to foster their tendencies. They feel that the attraction of physical exercise for the rising generation already overpowers the little attraction that regular study may possess, and that parents do not pay large sums of money to have their sons trained as athletes, but to have them well instructed in sound learning and religious education.

While it is undoubtedly true that many boys now give to athletic exercises a great part of the time due to study, it is still the fact that some boys habitually neglect exercise. The latter group may be divided into two classes—one is the class of lazy fellows, who lounge about in the confectioners' shops, and bring no credit to themselves or their school; the other is the class of industrious boys, to whom active exertion does not commend itself as a matter of vital necessity. From natural inaptitude for games, or from timidity or disinclination for violent exercise, or from feeble physique, they decline to join in cricket, football, and other sports. The time thus gained is spent in study, varied with an occasional constitutional walk.

These boys have an enormous advantage over their more active and play-loving companions; they take just enough exercise to keep their general health good, and, being industrious and well-conducted, cannot fail to obtain a good place in their forms.

The evidence before the Public School Commission showed that the most influential boys in the great public schools were now to be found in the eleven at cricket and in the crews of

the first boats, and not, as was formerly the case, high up in the sixth form. Those at the top of the sixth must of course beat those at the bottom. Hence it is worthy of careful thought that the present competitive system, by leaving out of consideration all manly exercises, does not select for commanders over men the persons who when young were the accepted rulers over boys.

While head masters and the public are troubled because many boys take too much exercise, they overlook a fact every day becoming more important to the nation—that the most successful boys take too little exercise. The German and Austrian Governments insist on a regular course of gymnastics for every boy in every school. These Governments, from motives of State policy, insist upon the physique of the rising generation being properly attended to, and they demand from school authorities as regular cultivation of the bodily as of the mental powers. It is not found that this inexorable demand gives an undue stimulus to athletic exercises. I fear that such is the perversity of the English boy's nature, that if a course of athletic exercises were declared to be good and necessary, and worthy to count in the award of school distinctions, the zest with which such exercises are pursued would be reduced. If a boy must not go beyond three miles from a certain spot, he has a great desire to go four miles at least; but if he is told he ought to go four miles he would be quite content to go two miles.

I was at Rugby myself in Dr. Arnold's time. I know what a boy's nature is, and I anticipate that if public schools were to give marks for swimming, running, shooting, and other games, the interest in them would diminish rather than increase.

The playground is now the English boy's own domain. He can do as he likes there. This constitutes its greatest charm, and much good, with perhaps some evil, is the result. I abhor the French system of continual supervision out of school hours. In fact, many intelligent Frenchmen detest it, and would willingly adopt the English system, but they recoil at the frightful consequences of a change from the excessive supervision of their lycées to the entire freedom of our great public schools. Freedom would lapse, they think, into license, and license into licentiousness. One acute observer said that the change would be a permanent good to France if but one generation could be obliterated, but that in the first twenty years they would rear a generation of devils.

I would not recommend supervision in the playground, but I would have the exercises that are most useful occasionally tested, and marks given in consequence. Such a course would

take off to some extent the attractiveness of certain games, and that result, under present circumstances, would not be undesirable. It certainly would not increase the idleness of the idle but it might bring the studious boy to the playground. My experience as an assistant examiner under the Civil Service Commission leads me to think that, such is now the idleness of some boys in our public schools, it would be impossible for them to be more idle. The worst evil that could accrue is, that some unprincipled boys might pretend to their parents that the inordinate amount of time spent in play might help to qualify them to pass a successful examination. This excuse could be met by giving no marks at all for cricket and football, which now consume the lion's share of a boy's time, and which it would practically be impossible to graduate by marks.

But my immediate question is not with public schools, but with competitive examinations. The excessive time now given to physical exercises no doubt takes away from the time available for study, and the best athletes do not stand so high as they ought to do in school or college. Consequently, in a competitive examination, when book knowledge only is tested, the boy of studious habits, to whom field sports and vigorous exertion afford but little delight, and whose chief time is spent in study, gains a powerful advantage over his adversary. The book-worm is not troubled with an irrepressible buoyancy of spirits or with intense longing for active exertion. A missionary in India termed a successful candidate of this sort 'a book in breeches.' To change a dashing cavalry officer for 'a book in breeches' is a change far from beneficial to the nation. It is quite right to give marks for mental acquirements, but I would plead that some few marks should be given for efficiency in bodily exercises. Such a course would handicap the 'book in breeches,' but would bring to the front men whom the army, navy, and India require.

We will now consider briefly for what subjects marks should be given. I have shown why marks should be given for riding. The good swimmer likewise ought to score a few marks. At Cawnpore, in the Indian mutiny, Thompson and Delafosse saved their lives by swimming, and the former tells us that the best guinea he ever spent was that paid for swimming lessons at the Holborn baths.

If Bishop Cotton, whose memory is dear to Rugby, Marlborough, and India, had been able to swim, he might have still been spared to pursue his beneficent course of 'unhalting, unresting, untiring diligence.'

When Bishop Selwyn was in New Zealand he advertised,

have been told, for an Archdeacon who could swim. But it is not necessary to multiply instances of the advantages of swimming. Every boy should learn to swim as surely as he learns to read.

Great Britain, which annually sends out her sons to the remotest parts of the earth, ought to place some value on their early training in the mode of self-protection. Shooting, fencing, and even single stick are useful. Skill in shooting for prizes is now brought to the test of marks, and an examination in it could be easily managed.

Some marks ought to be allowed for skill in gymnastics and other athletic exercises. Numerous examples are furnished in India of the value of proficiency in manly exercises.

The gallant Outram first gained his people's love as their protector from wild beasts and from oppressors equally fierce and merciless. The heroes who have built up and consolidated the Indian Empire have been as distinguished for physical prowess as for mental powers.

Among these heroes, General Nicholson, who fell at the siege of Delhi, holds no mean place. India during the mutinies was saved by the Punjab, and the Punjab was saved to us by Nicholson.

When the mutinies broke out, he held command on the Affghan frontier under the heights of Takht-i-Suleiman (the seat of Solomon). From his unrivalled skill in all manly exercises, he had gained an extraordinary influence over the native mind. He excelled in all the arts his people valued. As a horseman or a swordsman he was unsurpassed. Such was the ease with which he surmounted difficulties that the brave but simple-minded people of Bunnoo believed him to be an incarnation of the Deity of good fortune. Success was expected to crown his every effort. His followers believed that, under his guidance, they marched to certain victory, tempered with just so much danger and difficulty as to make the contest glorious. His enemies trembled at the conviction that they must inevitably be defeated, and that it was almost impious to attempt to fight against fortune's favourite. Hence with but few followers he was able to disarm in quick succession about thirty regiments of Sepoys. So far did hero worship extend that since his death he has been worshipped by a set of men called after his name 'Nikal-senis.' Nicholson was a Christian gentleman, and nothing irritated him so much as to find even his hat an object of adoration; yet in vain did he chastise his worshippers with a strong arm and stout stick. He was born a soldier and a king of men. Manliness was the foundation of his

influence. Since officers like Nicholson increase a hundredfold the strength of the nation, some consideration ought to be given to manly exercises in a system of selection by merit.

It is not intended that success should be achieved solely by superiority in manly exercises, but that candidates who are very deficient in them should suffer some disadvantage. It might at first appear that this object would be best accomplished, if a certain amount of marks were deducted from the totals gained in other subjects, and then partially restored according to proficiency in these exercises. But a little consideration will shew that the list in order of merit would be the same in this case as it would be if marks up to a certain maximum were awarded in the usual manner and added to the totals. The amount of this maximum would be settled by Parliament, or by the heads of the great departments of State. At the commencement of the scheme it would be expedient to keep it low. It would probably be found that the average of the marks gained under this head would be comparatively greater than that in languages, and much greater than that in mathematics. On account of the time necessarily occupied in the examination, manly exercises should be one of the optional subjects for the army. In the Indian Civil Service competition, 375 marks each are allowed for French, German, and Italian, and 500 each for Sanscrit, Arabic, Mental Science, and Physical Science. If 500 marks were not grudged for the maximum in manly exercises, it might be allotted as follows: 125 for riding, 125 for swimming, 125 for shooting, fencing, &c., and 125 for athletic exercises. This surely is not too much when 1,500 marks are given for English, 1,250 for mathematics, and 750 each for Latin and Greek. The maximum and its allotment are, however, matters of detail which need not be insisted on at this stage of the discussion.

It may be urged that it is difficult to hold examinations in riding, swimming, shooting, fencing, and in athletic exercises. There is no more difficulty in testing them and in awarding marks for merit than in marking a *vivâ voce* translation. Such examinations have been held in Bengal for two years with success, and what is done in India can be done in England.

A powerful argument why the Government of the country should regard with favour every effort to encourage and promote manly exercises is found in the results of the last census in 1871. It is thereby shewn that the increase of two millions in the population has taken place in towns and not in the country.

A people cooped up in crowded towns cannot rear the hardy

progeny of the country. Attention has been drawn to this in a lecture by a Professor in a London Hospital. Dr. Poore spoke as follows:—

'If therefore we have a national system of mental training, surely we ought to have a national system of physical training. For us, whose masses are for the most part centred in densely populated and unhealthy cities, this physical training seems doubly important. In the early days of our history, when the feudal system still existed among us, every able-bodied man in the country was trained to bear arms, and although there was no standing army, no class who made fighting their sole profession and physical training their principal aim in life, we were then dreaded by our foes, and rightly regarded as the fiercest nation in the world. In whatever way the physical training is to be effected, whether by a term of compulsory military or naval service, or otherwise, there can be no doubt that it is absolutely necessary.'

Physical training would be greatly promoted if it counted in Civil Service examinations. A quarter of a century ago, Macaulay pointed out how wide the influence of the examinations must extend. The interest in the subject of such training would permeate the country through a thousand channels. The mother anxious about the future career of her sons would inquire at meal-time not only whether the son fond of play had learnt his lessons, but whether the studious son had gone through his extension exercises. The father on the School Board would buy some book on school drill, and would recommend that drill should be introduced into all classes. As a natural consequence, gymnasia would be attached to large institutions, and an active, well-knit frame would be regarded by a parent as a qualification in his son for which the schoolmaster was responsible. There can be no doubt that competitive examination in physical training would tend to make the nation manly. This subject deserves special consideration, while every year, as the census shows us, the population of the country is being decanted as it were into towns. Such examinations, moreover, would not only produce good, but they might tend to prevent evil.

It is sometimes said that by a mysterious perversity of fate round men are placed in square holes, and square men in round holes. A perversity of this sort was lately seen in the results of some competitive examinations. None but an enemy would question the ability, genius, courage, generosity, and kindness of heart and high sense of honour that mark the Irish gentleman, but some who are even friends have doubted whether

such characteristics as wit, fun, and brilliancy are not more common than tact, sound judgment, and discretion.

In the Excise Department there is more necessity for sound judgment and discretion than for brilliant genius; yet at page 8 of the Civil Service Report for 1872 the following sentence occurs:—

'At the examinations thus held as many as 240 of these important and (prospectively at least) valuable appointments have already within the last 18 months been assigned as the reward of merit to successful candidates. The aggregate number of competitors for these 240 places was 1,804, or nearly in the proportion of 8 to each vacancy. The numbers examined at the several centres and the degree of success achieved by each are stated in the following table:—

	Examined.		Selected.	
London	572		65	
Liverpool	79		4	
Bristol	49		6	
		700		75
Edinburgh	230		17	
Glasgow	55		6	
		285		23
Dublin	357		80	
Belfast	169		16	
Cork	179		31	
Galway	120		15	
		819		142
Total		1804		240

Hence England and Scotland together furnished only 98 out of 240 successful candidates, and Ireland gave 142.

As examination centres, Dublin was far ahead of London in successful candidates, Belfast was better than Liverpool and Bristol together, Cork was superior to Edinburgh, and Galway beat Glasgow. If this superiority continue, the majority of the future Excise officers in England, Wales, and Scotland will be Irishmen. This circumstance will go far to raise cries similar to that of Ireland for the Irish; we may hear Scotland for the Scotch, and England for the English. In fact, Home Rulers may secure for their specific views a much larger following in Great Britain than Ireland itself would approve. What has happened in one case may happen again in another. When the Treasury asked for officers for the Excise, men to be distinguished for calmness, sound judgment, and discretion, it received a supply of Irishmen. So when the Horse Guards ask for dashing young cavalry officers it is possible that England,

Ireland, and Scotland may perversely send up successful book-worms. An exuberance of animal spirits and a passion for physical exercise are not bad things, either for the army or for India, yet the chance of competition may unfortunately weed out candidates of such proclivities and select in their place the meek, quiet students whose weak frame and pallid cheek tell of unremitted mental toil, and to whom the most dreaded part of the final Indian examination would be the test in riding. From the national calamity of such a selection marks for manly exercises would be a strong preservative.

It is but justice to admit that the selection for the Indian Civil Service has on the whole been fortunate, and that the successful candidates have with few exceptions possessed a good average physique. This is partly due to the care taken in the medical examination, and partly to the fact that the competition is so severe that a good constitution is required to stand the mental strain.

The system of selection by competition has many adversaries. Birth, wealth, and power have suffered a loss of the influence held to be legitimate, and have common cause for dissatisfaction. Men with illustrious ancestry, and many more without that distinction, believe that gentle blood is some security for noble conduct, and that a military officer ought to be the son of a gentleman.

This paper is intended as a slight contribution towards the formation of public opinion on the matter. I have shown that the present system of competitive examination tests a small portion of the qualifications desirable in a public servant; that though moral qualifications must necessarily be left untested, physical qualifications can be determined satisfactorily to the competitors and with advantage to the State; that physical qualifications have been tested in Bengal, and can be similarly tested here; that they promote the efficiency and influence of an officer; that their acquisition would not increase idleness in public schools; that widely extended attention to them is greatly needed, because the strength of the nation is being drawn from the country and cooped up in towns; that the Army and Navy and Indian Civil Service require some protection against the possible influx of mere book-worms; and that the system of selection by competitive examination would acquire increased strength by its extension to physical training.

Sanitary Education in Elementary Schools. By ALFRED CARPENTER, M.D.

SOME important points connected with preventive medicine which require serious consideration have been forcibly brought to my notice since the passing of the Elementary Education Act. Various questions arise as to how the parent or guardian, the school-manager, and the magistrate should act in those cases in which infectious disorder is assumed to exist or to have recently been present in a particular family. A most important question bearing upon the spread of epidemics at once arises, viz.: Is it possible to prevent the spread of infectious disorders whilst the attendance of children at elementary schools is to some extent compulsory?

Again, Is the excuse which is often urged by parents (that the children have had the measles or hooping-cough or chicken-pox), when summoned before the magistrate's court for the non-attendance of their children at school, to be considered sufficient to excuse the parents from performing their duty? Ought children who have been in possible contact with such diseases to be kept from school as long as any chance of infection exists? If the answer to these queries is in the affirmative, it appears that the children of the very poor in a thickly-peopled district need never get to school at all, especially if the converse is to be held good, viz., that parents and guardians who send their children to school whilst they are in a possibly infectious state shall be liable to some kind of punishment.

The questions I have propounded clearly indicate that there are great difficulties in the way of a hard and fast line for their settlement, and that it may often be advisable in apparently corresponding cases for an opposite rule to be adopted by the magistrate in deciding a course of action. There are three distinct classes of persons to be considered:—

1st. Those who send their children to school to get them out of the way, and who consider their own comfort before the safety of anybody else. This class will start their children to school with measles or whooping-cough or even scarlatina in the house, and even send the patients themselves immediately after their recovery, without caring for, or appearing to know of, the danger they throw in the way of other families, and making no attempt to disinfect their children before they send them. If the latter keep their own counsel, there is no means of finding out the imposition.

2nd. There is the class of people who don't care whether their children go to school or not, who don't trouble themselves to provide the required pence; and if the little ones play truant on pay-days, rather commend them for it than otherwise. This class often set up the plea in the magistrate's court of whooping-cough or chicken-pox, or some other children's malady, as a reason for keeping them at home; and if, as in these instances is generally the case, the parents are '*peculiar people*,' and don't engage the services of a medical man to pilot them through the disease, there is no certain means of discovering the deceit.

3rd. There is the class of persons who like their children to go to school. In each of the classes cases occur in which disease is so mild that the parents do not know of its existence, or the children do not show the eruption, which is the specific symptom of the disease, until they have reached the schoolhouse, or even have attended a day or two before it has been discovered. In the meantime, the whole of the children in the school, who are liable to take the disease, have been exposed to infection.

The existence of these three distinct classes of persons shows the difficulties which have to be considered in dealing out justice to the poor. It is impossible to adopt one line of conduct. Each case, whether before the Managers' Committee or the magistrate's court, must be dealt with 'on its own merits,' and according to the '*bona fides*' of the parents. If we consider the first class of cases, it is certain that some households are so constituted that no danger will accrue to the school from the continued attendance of children, though some members in the household may have been recently suffering from an infectious disorder. At the same time the 38th section of the Sanitary Act, 1866, which renders parents liable to a fine of *5l.* for sending children to school who may spread epidemic disease, is a necessary clause, and in some cases should be rigorously enforced. In most of them, however, it is at present a dead letter.

The plea of infectious disease often raised in the magistrate's court is sometimes true; but in a great majority of instances it is not so, and is only raised to cover the real cause, which is indifference to, or a dislike of, education because of its cost, although only 2*d.* per week, or because the child is wanted to do something at home, or for the sake of the small pittance the child can earn. There is no medical attendant; the guardian declares that the child has a cough or has had measles or some rash last week. At times it becomes impos-

sible to disallow the plea, and the children continue to run wild and wallow in the gutter in spite of the compulsory clauses in the Education Act.

The third class of cases it is quite impossible to deal with by fine. A child goes to school feeling a little unwell (but in some families school-children often do so); in the afternoon the scarlet rash is out, and several school-fellows have been infected. The parent did not know anything of it, and cannot in strict justice be pecuniarily punished for spreading the disease.

These difficulties might be very much decreased by taking measures to render children less susceptible of infection. A schoolroom containing a number of children, one of whom is sickening with scarlatina or measles, or among whom is a child recently recovering from any of such diseases, is a hotbed in which the production of epidemic poison is rapidly promoted. It is much more rapid in its development in some seasons than in others, and among some classes of children than others. Children with dirty clothes, and who are seldom washed, spread the disease like wildfire; whilst children who are bathed every day, and frequently put on clean clothes, take epidemics with comparative difficulty. The cultivation of the habit of personal cleanliness in elementary schools would materially decrease the risk which naturally follows upon compulsory attendance.

I propose, therefore, that washing should take its natural place, and be a part of the course of teaching in every elementary school. Actual washing should be insisted on during school hours, and a daily inspection made by the master or mistress at a stated time—an inspection which should be rigid both as to skin and clothes, corresponding to the dress-parade which soldiers have to undergo. There should be a washing and combing class, and also a clothes class. The first would have reference to the cleanliness of skin, nails, and hair; the second, the cleanliness and tidiness of clothes. Washing and mending should be attended to as a necessity as much as spelling or writing. No greater boon could be bestowed upon our lowest poor than inculcating into the minds of their children the necessity for cleanliness, and teaching them how to do it. This is a branch of a child's education which is supposed to be taught at home; but no one can see the wretched, dirty, ragged urchins who pour out of some schools at closing time without being painfully struck with the utter neglect of the required teaching both at home and at school. There are many exceptions; but in instances much too numerous, a slatternly, untidy habit is indulged in by the

master in his own person, and of course he is not likely to control the untidy and dirty state of his pupils or be antagonistic to their teaching at home; to instruct the children how to wash, and to see that it is done; to keep their hair tidy and clean, their clothes clean and free from raggedness, would be a far greater boon to them, both in the present and for the future, than to teach them the distance of Canton from London, or that the planet Jupiter has four moons.

An occasional inspection of children in workhouse schools, as well as the evidence afforded by the daily press, has told me how this portion of education is neglected in pauper establishments as well as in elementary schools. Purulent ophthalmia and scald head is the rule among such, and is mainly due to neglect of cleanly habits. The presence of such diseases in such establishments would be best met by a heavy fine upon the managers themselves. The injury which is done to the eyes and health of children is enormous as to its imperial cost and the dead loss which it inflicts on the country, compared to the expense of washing and cleaning their heads, under proper superintendence. Their heads should be washed and cleaned and their hair cut in class, if disease is to be arrested, for it is quite impossible to get it done properly in the homes of many of those children for whose education elementary schools were by law established. Until it is done properly in pauper and board schools the diseases mentioned will not be eradicated. It does not follow that every child in an elementary school should belong to the class. In many instances home teaching would enable the child to pass his examination without going into class, but the requisite inspection should be daily made.

This course of education would necessarily render the addition of several things to the present requirements of the schoolhouse. Thus, it would be requisite to have sets of clothes that might be worn by some children whilst their own were washed and mended. This would not be a difficult matter. Every public elementary school ought to have a proper washing-place, so that the children might wash the whole of the body at least twice a week, as well as their hands and face. There should also be a washing-place for clothes, with a drying closet attached, which could dry the clothes as quickly as possible, and be so arranged that cloth clothes might be cleansed and disinfected, as well as linen clothes washed.

Is the custom of wearing the same dirty garments day after day, getting daily more filthy, an unavoidable one? It is this custom which makes the air of rooms so unwholesome in

which the lower classes of children assemble, and which frequently produce the first seeds of evil in the constitution, especially when they go into the room, damp, from the effect of a drizzling rain. Everyone accustomed to a badly-ventilated school-room knows that it is the smell from damp and dirty clothes which is the principal source of the offensive atmosphere. Even if the clothes will not wash, an exposure in the drying closet to a temperature of about 350 will not hurt their texture, whilst it will entirely destroy any lurking seeds of infectious disorders which might be clinging to them, as well as destroy the seed-beds themselves, and in the possible case of infection being brought into the school in the clothes would, in the majority of instances, prevent it from spreading among the pupils.

Such a course of action would tend more than anything else to limit the spread of infectious disorder, and deprive it, when it did come, of much of its malignancy and danger, especially if the sanitary arrangements of the place under the control of the local sanitary authority were properly carried out.

The course of instruction in mending clothes would be a boon to boys as well as to the girls. It is wonderful what a help a sailor is in some working men's households, in consequence of his ability to mend his clothes and do little repairs to the clothes of others. There is no reason why every working man should not be as helpful in that line as an ordinary seaman can be, whilst in the case of children coming from an infected house, or ignorantly taking infection into the school, the wash-house and the drying-closet would cause the mischief to be scotched at once.

I would urge this view upon the managers of our elementary schools as one of the most important means which can be taken to render the health of the children of the poor generally satisfactory, and make them moderately independent of chance epidemics. If such did come it would have a marvellous effect in reducing them to the mildest possible form, and materially assist in shortening the necessary quarantine which is now properly required. I contend that a public elementary school should possess—

1. Access to a bath, in which every child should be required to bathe twice a week. Every day would be better still.

2. A washing-place, in which they should be obliged to wash every day.

3. A room, in which the hair should be combed and the head cleansed every day, or oftener if necessary. These operations should be superintended by some person who should see

that the elder children attended to the younger as well as themselves, and so teach them to be careful of others.

4. A laundry, in which the clothes which required it could be washed.

5. A drying-closet, capable of being heated to a temperature of 400, in which washed clothes, and also all damp garments, could be quickly dried. This would be a great boon to the children on wet days.

6. A store of needles, threads, tapes, &c., for mending purposes, the use of which should be taught to boys as well as girls, in class, as often as might be necessary.

I contend that all these are necessary for the education of the great mass of our poor, as much as, if not more than, a knowledge of geography and astronomy, or even of history. It will be impossible for the people to be godly until they are instructed in the way of cleanliness. Cleanly children will acquire a dislike for personal dirt, and retain it to the end of their lives. They will make more effort to raise themselves from below the level of brutes to that of Christians than they otherwise would do if allowed to remain accustomed to filth. Use becomes second nature, and second nature in a generation or two becomes instinctive.

It is only by educating our poorer classes in cleanliness in early life that we shall make them as a whole love it for its own sake, and hate dirt and those habits which tend to make man lower than the beasts of the earth, too often now arising from an acquaintance, an intimate association, with dirt and dirty homes among the poor. Poverty may be clean, and with cleanliness the first step will have been taken to do away with the evils which follow in its train, and that health secured which riches without cleanliness cannot possibly purchase.

MISCELLANEOUS.

Mr. Joseph Payne, of London, read a paper 'On Dr. Morell's Report on the "decided success" of our System of National Education.' Mr. Payne said that Dr. Morell's reputation as a psychologist, and his long experience as an inspector, made his report on the educational condition of our primary schools especially important. People have been much dissatisfied both with the quantity and quality, the results gained, and it is therefore pleasant to be assured by Dr. Morell that the system was, after all, a 'decided success.' When, however, we

find that it is chiefly distinguished by its 'mechanical' character, and those requirements which depend upon thought, sentiment, reflection, or research, take a very low and exceptional place in it, and, moreover, that it makes no provision for 'the development of the intellect, the formation of the understanding, the elevation of the moral feelings,' &c. (that is, for those objects which are of the essence of education), our satisfaction is much misdirected. For all classes of beings can such a system be intended?—for parrots, asses, and mocking-birds? Surely not for beings capable of showing intelligence, imagination, taste, moral feeling? Dr. Morell's assurance that the attainment of these are beyond the mechanical 'ideal,' and that 'common sense' should make us satisfied with what is practicable, are questioned. It is quite practicable to cultivate children's minds. It is done in Germany, Holland, and Switzerland, and ought to be done in England. English children are not machines, but intelligent beings, and should be treated as such. The question was settled by Dean Dawes's Elementary School at King's Sonborne, where real education, not mechanical drill, prevailed. Reading, as a mechanical exercise, is, Dr. Morell says, 'well done in our schools, but he can easily count upon his fingers the schools which he has found ready with expression (*i.e.* with intelligence) well taught.' Mechanical reading, even at its best, is not entitled to be called a 'decided success.' Success in mechanical drill is not success in education. Even by Dr. Morell's acknowledgment, our system excludes what it ought to contain, and contains what it ought to be without. Success in mechanical drill is the cause of failure with regard to 'higher subjects,' inasmuch as it hinders the promotion of their intellectual habits, on which success in these subjects depends. Education in the true sense is not aimed at by our system, and therefore not attained. Education is culture, and mechanical drill has nothing in common with culture. It is idle, then, to boast of 'decided success' in our schools, and Dr. Morell's official defence amounts to a severe condemnation.

Mr. M. Maltman Barry read a paper on 'Secular Education in the Interests of Religious Truth.' He said that the right of children to education was now established in this country. Mr. Forster's Act of 1869 had many faults, but even if it had had many more, they would all, in his opinion, be more than redeemed by the recognition of this right in the adoption of the principle of compulsion. If the education of our children was to be only secular, it was probable that there would not be much ground for complaint. Upon the relative

excellence of secular subjects there was practically no difference of opinion in the schools, and the State, being the embodiment of the concentrated wisdom of the nation, might be safely left to determine at least the main lines of a secular system. But, unfortunately, the education of the children was not confined to secular subjects, and hence 'the religious difficulty.' The State, sensibly realising its incompetence to dogmatise on theological questions, had delegated the impossible task to the parent. But was the individual parent more capable than the State to divine God's will in revelation? Or was it that the State was infidel, and left the parent free to fill the child's mind with whatever notions on theology he thought fit? He was afraid that the latter was the more likely supposition, and if it was correct, he did not hesitate to say that the State, in so transferring power from itself to the parent, perpetrated an infinitely greater wrong upon the child than would be involved in its own usurpation of the power. There seemed to be a settled conviction in the human breast that religion was the principal thing. Even where, as in so-called heathen lands, the light of intelligence burned dimly, religion was often a consuming fire. All over the world the professed disciples of Christ, Confucius, Buddha, Mahomet, having the children in their power, sometimes through a good and sometimes through a bad motive, but most frequently without any motive, made unto themselves images of clay after their own theological fashion. In support of this condition of things it was said that, by virtue of his relationship, the parent was entitled to determine what creed his child should embrace. But, Mr. Barry asked, was that not an usurpation of right of judgment—a coming between the child and its Heavenly Father, to whom, in heavenly things, it was alone responsible? If the parent was to determine the child's creed, why was the child-man provided with the germs of a capacity for discerning religious truth? The logical answer, for behoof of his child, was too absurd to be seriously entertained. It was difficult for him to find language to express his grief and horror at the sight of so many millions of children growing up in the faith of their parents, as if the mere accident of its being their parents' was a guarantee of its truthfulness, or as if truth was an altogether immaterial element in the matter. He put it to his fellow-believers in the Gospel of Jesus Christ whether they would not find in this universal system of mental sacrifice, this horrid massacre of the intelligences, the solution of that, to them, insoluble problem, why, eighteen hundred years after His death, His followers were still a miserable minority of the human race, and

He Himself was still to the Jews a stumbling-block, and to the Greeks foolishness? The evil results of bias in religion were obviously great, and were, moreover, in their very nature, permanent and irremediable. What he pleaded for was simply that, as our religious beliefs were only beliefs, and not ascertained, demonstrable facts, we were bound to abstain from forcing them on others. It might be said that by withholding religious instruction we would be denying the child one great buttress against temptation to sin, and leaving a void in its heart which the devil and the world would eagerly fill. He was no irreverent derider of such considerations where they existed, but he did not think it could be shown that they existed there. What were, he asked, generally and as a rule, children's sins? Doctrinal heresy or infidel speculations? Certainly not. Practical deceit and active selfishness? Just so; and he thought that habits of truthfulness and unselfishness might be imparted to children without teaching them the truths of the Thirty-nine Articles or the loving-kindness of the Athanasian Creed. In conclusion, he asked, did creeds conflict? Admittedly. If so, could more than one be right? Clearly not. Then, which was right? When that was unanimously determined, he should, perhaps, cease to object to its being forced on the soil of conviction in minds admittedly immature, and, consequently, incompetent to distinguish the truth of God from the error of man.

Mr. Alexander Barnhill read a paper giving 'An Account of the Education of Blind Children in Ordinary Schools.'[1] Mr. Barnhill said the country was awakening to a sense of neglect in the matter of education, and efficiently meeting the necessity. The blind are sharing the benefit of this new-born zeal, and it is time, for they have been more neglected than others. It was more difficult to learn the real facts as to blind children, because they had been comparatively an isolated portion of the community. They were much scattered through the country; they received their education in institutions which were supposed to be able to provide for all. There was, however, no agency for seeking them out till lately, so that the number and condition of those neglected were very little known. The search for the adults, to teach them to read in Dr. Moon's type, which was very successful, revealed many children who had not been educated. It was found that they were too numerous and too widely spread to

[1] See *Transactions*, 1868, pp. 410, 458; 1873, p. 409.

be overtaken by institutions; the necessity therefore existed to provide some good means of education otherwise. As there seemed no other likely means, it was proposed to have them admitted to the ordinary schools. The great difficulty to this plan was the probable interference with the teacher's time, and a scheme was devised by which blind children would get a fair share of attention, and would not interfere with the general exercises of the school. The scheme proposed was to ask the teacher first to permit an older scholar to give a half hour's reading lesson, forenoon and afternoon, in Alston's Roman raised type. This type being readable at sight, any advanced scholar or pupil teacher disengaged would be available for that duty, and could be changed as required. The second request was to permit the blind child to join a class with those having their sight at about the same stage of advancement, and take all the other lessons with them. The third request was to give the ordinary lesson books of the class home with the child, that the father or friend might go over the lessons in advance, in order that he might come prepared with the class exercises. This method, upon full trial by various teachers, has been found to be both simple and efficient. The proposal was not made in any spirit of opposition to institutions. These had been very helpful in discovering suitable appliances and in educating many of the blind; but they were too limited and left too many uncared for to claim to be a suitable provision for all. The conditions of admission were generally beyond the reach of the friends of the blind. The new proposition was very much to do what they left undone, and to give any parent the opportunity of having his child educated at home. One great plea for the plan is that education may be provided for all blind children. When it is considered, as recent inquiries have revealed, that less than fifty per cent. had been taught at institutions, it will be readily admitted that it was time to provide a remedy. What was this but educating one-half of the blind to be beggars or paupers? Now that they can be educated in the ordinary school, nothing need stand in the way of all receiving a good education, extending as long as possible. To prevent any hindrance, there should be free education and appliances provided for those not able to pay; and to show that there is no reason to fear that their education among sighted children will be only the simplest elements, it may be mentioned that blind children are now being taught in public schools, even in the higher classes, with satisfactory results.

A paper by Mrs. AMELIA LEWIS, of London, on 'The most beneficial way of teaching History and Geography combined, called Ritter's system in Germany,' was read. The writer said: There can possibly be no better medium for the expansion of mental powers, than the teaching of the history, or rather the story of the lives of people and nations that have gone before us in our own land or in others; but such teaching, if only pursued in the abstract, leaves often in the learner's mind nothing but faint shadows of impressions that cannot be realised, because they have no connection with the inner life of the learner. It is difficult for a child to comprehend anything but that which it can perceive with its senses; and if that is the case with circumstances occurring at the present time, how much more must it be so with those removed to a distance in the past. The child cares little for conquests, and kings, and wars, and battles its own nature has not the slightest sympathy with; but it does care for the spot it lives in, and the garden it plays in, the trees it sees, and the house which is its dwelling. It can understand how these places are peopled by those that surround it. This attachment to place in realising the life of the present ought, therefore, to become a guide for the past, and make us adopt in teaching children the story of the past a method which shall unite the description of scenes remote from the learner's mind with the places where they actually took place; that hand in hand with the gradual account of a people must go the description of the natural phrases of the country it inhabits. Then the two will become so welded in the learner's mind that he cannot deviate from it, and that they will form one picture, which will present itself in living outlines before the child. A row of facts of no possible consequence to the child is nothing; it hinders development rather than forwards it; a combination of circumstances and facts, generally expanded, and attached to places that exist, and which the learner sees painted before him, creates new ideas in him, and improves the mind by making it realise descriptions and the natural combination of place and action.

Whatever may be the difficulty with the teacher at first, he will be rewarded if he is determined to point out nothing that the learner cannot comprehend and make use of. In fact, each pupil must positively become his own geographer and historian.

Miss E. A. MANNING read a paper 'On the Kinder Garten System in its principle and its practice.'[1] After first referring

[1] This paper is published in pamphlet form by Edward Stanford, Charing Cross, London.

to the gradual spread of Fröbel's method in Germany and other continental countries, in England, and in America, his principle of education is described, namely, the harmonious development of children's nature by means of a careful guidance of their own efforts and impulses. He felt that the self-education which they are constantly carrying on should form the basis of all the teacher's action, agreeing in this with Pestalozzi. It was Fröbel, however, who first systematically applied this principle to children not yet old enough to be sent to school. His own experience in teaching had led him to see the desirability of beginning physical education and religious training from the very earliest period, under the kind and judicious influence of a teacher, and with the advantage of companionship. He gave to his infant schools the name of *Kinder Garten*, because the gardener's training of plants was to his mind a true illustration of the teacher's work. Owing to his full comprehension of children's nature, he was specially fitted to form plans of education for them. We are struck with the wholeness of his view as to their various capacities. His philosophic and sympathetic nature enabled him to understand them so well. The characteristics to which he particularly adapted his scheme were—1. Bodily activity; 2. Observation; 3. Constructiveness; 4. Love of the beautiful; 5. The social tendency; 6. Playfulness; 7. A growing moral nature. He felt that these are common to all children, and can be advantageously guided.

The paper next explains Fröbel's practice under the following heads:—1. The gifts—simple toys, in which elementary instruction can be based—balls, cubes, bricks, &c., arranged so as to lead up by degrees from the simplest to the more complicated ideas and calculations. 2. The occupations—a series of employments which stimulate ingenuity and encourage industry, and afford great delight to the pupils, such as paper-folding, drawing, mat-making, modelling in clay. Reading and writing are also generally taught, but by a natural, easy method. 3. Object lessons, leading to geography, physics, and natural history, but given alternately, and in connection with the children's daily experience. 4. Music, on which Fröbel relied greatly, and which he introduced as much as possible. 5. The games, which are of a dramatic kind, and help to stimulate the imagination, while they exercise the limbs healthily and gracefully. 6. Moral training, including lessons and tales on moral subjects, and a constant watchfulness on the part of the teacher to encourage right conduct and unselfish dispositions, and to check the reverse. The whole tone of a Kinder Garten tends to make the children obedient, self-controlled,

and kind, because each is led to feel that he is part of a social whole. In conclusion, the paper dwells on the absolute necessity that a Kinder Garten teacher should be imbued with Fröbel's principle, even if she adds to his practical plans. She must conform all her work to that principle, and must let her life influence the children under her charge. A child well trained in a Kinder Garten is prepared in body and mind to begin its school course far more satisfactorily than one which has not been so trained, and yet it has not been forced; its powers have simply been allowed to develop themselves under happy influences.

Mr. T. B. Grierson, of Thornhill, Dumfriesshire, read a paper 'On the Establishment of Local Museums.' He said that, having formed a local museum in the locality where he resided, the results had been such as to induce him to recommend the formation of similar museums in other places. He proposed that the work be begun by private efforts, it may be by two or three apprentice boys, when assistance is sure to follow from other quarters, and it will not be long until most interesting additions are made to it. The plant or animal hitherto unknown in the locality is found and brought to the museum. If local museums were general over the land, by their humble means would science be advanced, and the philosopher might step from his academic groves to recognise the worth of that which might be in some obscure village. Provision should be made for the guardianship of Government if possible, to ensure that the museum would not ultimately fall into decay by neglect. Such assurance would be a most powerful aid to the success of a local museum, for who then need hesitate to give or bequeath?

Add to a museum, according to the means available, as many aids to education as possible, a library for consultation and general reading, a garden, a chemical laboratory, lectures, classes, all that would tend to develop taste and define knowledge, and render it impossible for many of the existing sanitary evils to be tolerated.

HEALTH.

THE SEWERAGE OF TOWNS.[1]

What are the best Methods of Sewering Towns, and of disposing of their Organic Refuse? By ANDREW FERGUS, M.D., M.R.C.S. Eng.

ON merely looking at the title of this subject as it stands in the prospectus, one would imagine that the sewering of towns and the getting quit of organic refuse must of necessity go together, and that in dealing with the one you must at the same time, and by the same means, accomplish the other. I believe this to be a fallacy, and am inclined to think that it has wrought much mischief, hindering the right sanitary solution of the sewage problem, and involving communities in much perplexity. The unwholesomeness of towns must be increased by allowing refuse organic matter to decompose in their midst, and therefore it must be of essential importance to make provision for the removal of all such organic matter before it can decompose.

It is a well-ascertained fact that in the atmosphere of towns there is less oxygen than in rural districts, and again less in crowded districts and in the neighbourhood of middens than in open spaces in the towns. As the ultimate aim of sanitary science must be to get rid of preventible deaths, and make our towns as healthy as the country, it must be a very important inquiry whether or not it is possible to remove from the former their organic refuse before decomposition.

Our present system of water carriage appears to me quite contrary to the true principles of sanitary science, seeing that the rainfall, subsoil water, and all possible kinds of refuse matter are indiscriminately huddled together in the sewers, and

[1] See *Transactions*, 1873, p. 436.

from them discharged with an utter contempt of ulterior results into the nearest stream.

Allow me then, in the first place, to direct your attention to the present system of sewerage, and add a few hints as to its improvement.

I shall, secondly, point out some of the sanitary evils arising from water carriage of excreta, and in the third place glance at a few remedial measures.

First, then, the sewering of towns—and few subjects can be of more importance, it being well known that the health of communities is much influenced by the more or less perfect way in which this is carried out. The objects of sewerage are twofold:—First, the rapid and complete removal of surface water; and second, the drying of the subsoil, both of these having an important bearing on health. Sewers should therefore be laid so as to perform the double duty of receiving the surface water by openings properly placed, and also so that their upper surface shall allow the subsoil water to flow into them.

We can easily see that tubular or egg-shaped drains laid at proper levels would best accomplish these ends, and that at intervals the jointings on the upper surface should be left open to receive subsoil drainage. Even when drains are laid simply with a view to carry off surface water and refuse, they dry the subsoil; and this they could not do unless they were pervious from without. From this it follows that they will allow the escape of the results of organic decomposition into the soil—polluting it and all wells which may be in their neighbourhood.

If our present system of drainage is to be continued, I think a change should be made in the construction of the drains themselves, and a plan adopted patented by Messrs. Brooke and Sons. This plan consists of a double set of pipes, cast in the same block, the lower one acting as a bed for the upper, and having pervious joints it carries off the subsoil water. The upper tube is circular and close-jointed, and carries off the surface water as well as all refuse matter. If these joints can be made to remain impervious the advantage is obvious, as the subsoil cannot then be impregnated with the result of any decomposition going on in the sewers.

It is the province of engineers to go into minute details about sewerage, and I shall content myself by giving a few hints by which I think the drainage of towns by our present system might be improved:—

1st. Streams should never be arched over and used as

sewers, because as the bed is always irregular and uneven, the flow will be retarded, and refuse matter will lodge and decompose in the crevices. If it is ever advisable to follow the course of a stream, then a regularly built sewer should be constructed.

2nd. Care should be taken that sewers are laid in firm earth that will not 'give.' In 'made' or loose sandy soil they should be laid in concrete, or Brooke's patent might be used.

3rd. If sewers are to pass through walls, great care should also be exercised to prevent pressure upon them from the subsidence of the said walls. This might be done by making an archway, and allowing the drain to pass under it free from all contact. Where this is not attended to, the drain frequently gets broken or cracked, and so allows the escape of noxious gases.

4th. The small drains should open obliquely into the larger, in the direction of the current of water running in the latter.

5th. Iron and glazed earthenware pipes should be used as much as possible for house, soil, and drain pipes—lead pipes, as we shall see by-and-bye, being very subject to decay.

6th. There should be a disconnection between the house drains and the sewers, to effect which a number of contrivances can be suggested.

7th. A plan of all the drains of each town and district should be prepared, and be readily accessible to the public, and in the same place the subsoil of the locality should be indicated.

8th. A plan of all the house drains, showing their connection with the sewers, should be given with the title-deeds of every house.

It is quite a mistake to connect house soil-pipes by putting them, as we generally see, in some out-of-the-way corner, covered from view; defects in them often existing for a long time, and producing much mischief, without being suspected.

9th. Steam and hot water from factories should not be allowed to pass into the sewers, as they both facilitate decomposition.

All sanitarians are agreed as to the necessity of trapping drains, and many contrivances have been adopted in order to do so. We may explain that a trap is a body of water interposed between the sewers and the pipes leading into our houses, to prevent the entrance of sewer-gas through these

pipes, and generally supposed sufficient to do so. A very common form of these is what may be termed the tongue trap, and it acts most effectually in preventing the entrance of vermin into houses where it is employed.

It is a square box having one opening into the house and another into the sewers, on its opposite sides and at different levels, while dipping deeply into it is a diaphragm or tongue. I have frequently examined these traps, and have been disappointed to find a large accumulation of fœcal matter on the house-side, which could not escape until it either dissolved or decomposed. The same state of matters existed in syphon traps, and indeed must do so in all cases where a body of water is the trapping medium, because nothing that floats can pass through the trap. Obviously it ceases to be a trap, as soon as any floating matter does so.[1] Very recently, in examining a deep tongue-trap in my own house, I found so much matter on the house side of it that I resolved to try whether I could not effectually prevent the entrance into the house of any sewer-gas which might arise from its decomposition.

Accordingly I placed the trap near the main drain, and laid the house drain open for several feet. Over this opening I suspended a wire cage filled with seaweed charcoal, and covered the whole with an iron grating; my object being to prevent all gas generated on the house side of the trap from getting into the house, and at the same time to deprive this gas as much as possible of its noxious elements by making it, in its escape, pass through the charcoal. This plan can very easily be adopted in the back-yard of all houses where the sewage flows to the back.

Still considering the subject as regards our present system, I may be allowed to state that to ventilate the sewers is quite as important as to trap them. Before entering on this, however, let us pause a moment to inquire whether we are using a proper term.

The term 'ventilation,' I should suppose, means the replacing of foul air by fresh air, of which, in a vast majority of cases, the various plans proposed certainly fall short. They do, indeed, provide for the escape of a certain portion of foul air from the sewer into the open air—not, however, to be

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[1] I may here mention that some traps (notably the Somerset) attempt to provide a remedy for this, by making an external opening both on the house and sewer sides of the trap, by means of which it is hoped that any gas formed will escape into the open air. I am not sure, however, that these openings are large enough to meet the difficulty.

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replaced by fresh air, but by equally foul air, from the decomposition going on in the sewer.

I must not be supposed as undervaluing the sanitary advantage of the removal of foul air from the sewers. I am simply attempting to show that it is not sufficiently done—indeed, that ventilation strictly so called hardly exists. Formerly I did believe in the ventilation of sewers, and some six years ago proposed that it might be effected by attaching pipes to the sewers and leading them to the under surface of the numerous boiler fires in this city. This was quite a cherished idea, and I abandoned it with great reluctance; but experiment, observation, and reflection compelled me to do so.

If we were to connect the sewers with furnaces, or build ventilating shafts, and create a current by fire, no doubt we would have an up-cast draught of air; but I fear very little of it would come from the vitiated air in the smaller drains, but from the nearest rain-water pipe, or from the open gratings in the streets.[1]

To illustrate how little effect trapping has in keeping sewer-air out of house drains, I show you these decayed lead soil pipes. (See Plate.) About fifteen years ago I first detected them. At first I merely looked upon them as a nuisance, because offensive, and did not connect them with disease; neither did I then know how these perforations were produced. In the first pipes I inspected, as the perforations were on the upper side, I imagined that pieces of lime might have dropped down on the pipes, and eaten their way through. This opinion I abandoned, as I found the perforations were from within. I also found that they were generally on the upper surface of the pipe, and that, therefore, the destruction could not be caused by fluid conveyed through it. I also observed that the pipe usually affected in this manner was the cross one, leading from the closet to the main descending soil-pipe; and that, if there was a bend or arch in the pipe, the upper surface of the bend or arch would become perforated. Another element to be taken into consideration is, that these perforations are most frequently found in the upper flats of houses, and occasionally in the sides of the descending soil-pipes.

The question now arises, How is this destruction of good, well-made lead pipes effected?

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[1] While I deny that we can ventilate a sewer, I quite concede that we can allow a portion of the vitiated air to escape; that doing so is a correct sanitary measure, much good having resulted from efforts in this direction, and the benefit being increased by the various ingenious contrivances to render innocuous the foul air so discharged.

If we remember the position of this destructive action in the pipes, and take into consideration the results of chemical analysis, as well as the increased rapidity with which this action takes place in pipes that are not ventilated, I think we are justified in coming to the conclusion that these results are owing to the action of sewer-gas.

If you will carefully notice the specimens you will perceive that the destructive action is from within, and that in some places the pipes are more or less corroded even where the action has not gone the length of complete perforation.

Of course, my own discovery of such pipes in houses has only been where I have been attending professionally, and where the diseases were of such a type as are known to be produced by breathing the results of the decomposition of excreta.

The diseases which I have observed as resulting from this state of pipes are typhoid fever, diphtheria, scarlet fever, diarrhœa, &c.; and in one or two cases I have had to order the removal of families who were suffering from ill-health from this poison, without exhibiting symptoms of any well-defined disease.

As the investigation of the causation of disease is carried out, I believe that the list already given of those diseases produced or conveyed by sewage will be increased. In two cases of phthisis, in people long past middle life, I could not attribute the disease to any other cause. The family history was good, the mode of living correct, and the general health satisfactory up to the time of the soil-pipes becoming corroded.

Plumbers do not readily detect this defective state of pipes, as they look for a liquid leakage. Some time ago, in visiting a case of typhoid, I asked the mother of my patient as to the state of the closet and pipes. She replied, 'Oh, doctor, you are wrong this time; all these things were renewed only two months ago.' Of course I was extinguished, but still ventured to inquire what might be the cause of a very perceptible, and by no means agreeable, odour. A dead rat was suggested as its possible origin. However, as it was no matter to trifle with, I requested that the plumber might be sent for, and also that he should be told that the soil-pipe close to the cross-pipe was eaten away. At my next visit the lady told me that the plumber had been very much astonished to find the pipe exactly in the state I had predicted. I now exhibit that pipe.

I have been told that this state of pipes must be peculiar to Glasgow, and must be produced by some chemicals getting into the sewers; but I have made many inquiries, and find the same thing existing in every water-closet town in reference to

which I have had information. Lead has generally been used as the material for soil-pipes, and as we have seen how capable it is of corrosion, it becomes a very important sanitary question to inquire how long a good lead soil-pipe will hold out. I have been studying this question for years, and it is now about eight since I first exhibited decayed pipes in public; yet I would not wish to dogmatise on the subject, but rather give approximations, and would remark that the time will vary under the various circumstances, according to the strength and rapidity of flow of the sewage, as well as the original thickness of the pipe. But after allowing for this, we must broadly distinguish between soil-pipes which are ventilated and those which are not. By the former, I mean when the pipe is carried up to the roof of the house and open to the external air; by the latter, I mean when the pipes are closed up. Of these last mentioned, the duration may be stated to be about twelve years, the extremes of variation being from a minimum of eight to a maximum of twenty years.

In ventilated pipes, the duration may be stated to be nearly double, running from twenty-one to twenty-three years, the extremes of variation being from eighteen to thirty or even more years. The practical sanitary conclusion which it concerns us all to keep in mind is, that any house, no matter how carefully or well built, may become unhealthy from this source, and that when cases of typhoid fever, diphtheria, &c., occur, the pipes should be thoroughly inspected—especially their upper surface—and the whole of the soil-pipe removed.

I must strongly insist on this, as in many cases the plumbers have declared the pipes to be all right, which turned out to be very defective when uncovered. For some years back, I have insisted on a careful examination of the soil-pipes wherever I have cases of typhoid or diphtheria, and in many cases where I could get this carefully carried out I have detected these perforated pipes, or sewer-air getting into the houses in some other way.

What led me first to connect this state of soil-pipes with disease was the fact that, as regards water supply, Glasgow should not be exposed to diseases resulting from excremental pollution; and if we have these diseases, we must attribute them to some other source.

It would prolong the duration of the pipe, and be an important sanitary improvement, if the soil-pipes were in every case carried up to the roof, and left quite open to the air. The expense of this would be more than compensated to the landlords by the greatly increased duration of the lead pipes.

These house soil-pipes were all trapped before they entered the drains, and yet you see as much gas gets through the trap as to destroy the lead. Of course we all know that, if there is great tension in a sewer, either from its entering a tidal river or from any other cause, there will be a temporary failure of the trap, and a rush of sewer-air past it. Still I do not think such an occasional occurrence sufficient to account for what we see in these pipes.

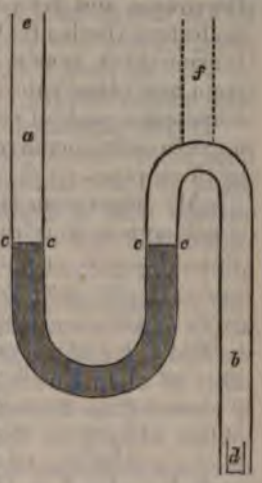
My impression is, that the cause must be one of pretty constant action, and that the following is the process going on without much cessation—viz. *the sewer-air is absorbed by the water on the sewer side of the trap and discharged from the house end of it.* I have not hastily arrived at this conclusion; it has been forced on me as the only solution of all the facts of the case. If the destruction of good, well-made lead pipes is occasioned by sewer-air, and if this takes place in well-trapped house soil-pipes, we are shut up to one of three conclusions—first, that the trap must be defective; second, that decomposition goes on in the trap itself to such an extent as to produce sufficient vitiated air to perforate these pipes; or third—the conclusion at which I have arrived, and have stated above—the passage of sewer-air *through the water* in the trap.

As regards the first point, I may say that all the decayed pipes on the table were from houses where the drains were trapped between the house and the sewer. In one case I detected this state of pipes as a cause both of typhoid and diphtheria in an establishment where the party in charge specially congratulated himself on the security of his traps. He showed them to me with no little satisfaction, and I assure you they were the most effective traps I have seen. Yet in that very establishment, four years ago, it cost upwards of 100*l.* to renew the plumber work thus corroded; and I am happy to mention that there has not since then been a single case either of typhoid fever or diphtheria.

As regards the second supposition—though there must always be a certain amount of decomposition going on in the traps, it is unlikely that it can be to such an extent as to occasion the destruction of lead pipes. We are, therefore, ourselves very strongly inclined to believe the last alternative—viz. that, however well drains may be trapped, sewer-gas will find its way from them into our houses; and any one who is acquainted with Graham's investigations as to the diffusion of gases will readily understand how this will happen. At the suggestion of my friend Mr. Scott, this has been illustrated as follows:—

A bent tube such as the annexed was used, *a* repre-

senting house side of trap or soil-pipe; *b* sewer side of same pipe; *c c c c* level of water in trap; *d* small vessel or test tube, from which the gas was evolved; *e* position of the test employed; *f* position of tube subsequently added to ventilate the trap.



In the first experiment a small glass tube was placed at *d*, containing solution of ammonia; in fifteen minutes it passed up the tube, through the water, and discharged the acid, with which litmus paper had been reddened, suspended at *e*.

In another experiment, instead of litmus paper at *e*, a small test tube containing a little Nessler solution was introduced; in half an hour the reaction of ammonia was very distinctly visible. The tube was left suspended by metal wire all night, and in the morning the wire was eaten through, and the test tube had fallen to the bottom.

An objection was taken to these experiments because ammonia is lighter than air, and has a strong affinity for water. Other gases heavier than air were then tried; the results were much the same, as will be seen from the table now given.

Gas	Sp. gr.	Source	Test	Time for reaction to show
Ammonia .	·50	Solution	Litmus . . .	15 minutes.
Do. . .	do.	do.	Nessler . .	30 minutes. Ate through a small wire in less than 24 hours.
Sulphurous acid . .	2·25	do.	Litmus . . .	1 hour.
Sulphuretted hydrogen .	1·25	do.	Lead paper . .	3 to 4 hours.
Chlorine .	2·50	do.	Iodide of starch paper	4 hours.
Do. . .	do.	do.	Litmus water in trap	Began to show in a few minutes. In half an hour the whole was bleached.
Carbonic acid	1·50	Generated	Lime water in trap .	1½ hours.
Do.	do.	do.	Litmus suspended at *e*	3 hours.

Against these experiments it was urged that the result would be different if the trap were ventilated. To meet this objection they were repeated, with the trap somewhat modified,

by the introduction of a ventilating pipe, which is represented by the dotted lines in the figure. The results were much the same, except that the reaction was longer in showing itself.

Mr. McTear, F.C.S., repeated and varied these experiments, with similar results.

If time permitted, I think I could show you that flushing does not do much good in a sanitary point of view. The best made and best laid drains are covered in their interior under surface with a deposit more or less deep, which materially retards the flow of fluid, and being irregular in its surface it allows organic matter to deposit. If the flow in drains actually was as rapid as it is theoretically supposed to be, when they are in small towns there should be no decomposition; but as we find there *is*, we must conclude that it takes place in one or other of the following ways:—1st, that the flow of sewerage is slower than that of water; or 2nd, that some decomposing matter already in the sewers acts as a ferment, and rapidly develops decomposition in the added excretal matter.

From the above it will appear that our present system of water carriage of organic refuse produces serious evils, that the production of sewer-gas arises from the decomposition going on in the sewers, and that by this decomposition the quantity of oxygen in the air is diminished.

Dr. Angus Smith has shown that there is less oxygen in the air of towns than in rural districts. Although the absolute percentage of decrease is small, still the effect of it must be considerable when we remember how much oxygen is required by living beings. Possibly at some future time we may be able to state with some degree of accuracy the individual part played by man, animals, combustion, and decomposition of excreta, in the deterioration of the atmosphere. At present, we have simply to deal with the last of these, the deleterious action of which is not confined to the absorption of oxygen.[1]

It is also charged with the more serious evil of producing poisons, which act detrimentally on the health of the community. Decomposition is essentially the oxidation of organic matter, and if this were the sole result of the careless disposal of our organic refuse, no great danger would ensue. But as excretal matter decomposes a putrid carbo-ammoniacal organic vapour is produced, which may act injuriously, either generally or specifically. Generally, it will merely lower the health, and injure the tone of the system; specifically, it is a very important agent in the production of disease.

[1] If the fœces and urine are kept separate, they decompose slowly; if they are mixed, decomposition goes on more rapidly; and narrow sewers and cesspools may be looked upon as ingenious laboratories for the production of sewer gas.

At the Sewage Conference at Leamington, Dr. Benjamin Richardson gave a list of fifteen diseases produced by organic poisons which might pass from sewage. We shall confine our attention to three of these as types, viz.: first, the diarrhœal group (cholera, diarrhœa, and dysentery); typhoid fever; and diphtheria. I do not now go into proof. If any one doubts that these diseases are caused by excremental pollution, I would refer him to Mr. Simon's admirable reports to the Privy Council, and would rather direct your attention to the bearing which the Registrar-General's return has on this question as set forth in the following table:—

Table showing the Number of Deaths per annum in England and Wales, from certain Zymotic Diseases separately, and from other Causes taken together, for each Million of Living Population—1838–71.

Year	Population	Deaths per annum for each Million of Living Population									
		Diphtheria	Dysentery, Diarrhœa, and Cholera	Scarlatina	Fevers	Measles	Hooping-Cough	Smallpox	Total from these causes	Total from other causes	Total from all causes
1838	15,287,699	..	225	380	1,228	426	596	1,064	3,919	18,502	22,421
1839	15,514,255	..	225	665	1,010	705	526	589	3,720	18,130	21,850
1840	15,730,813	..	305	1,260	1,092	593	390	663	4,303	18,562	22,865
1841	15,929,492	..	264	889	932	433	508	400	3,426	18,160	21,586
1842	16,130,326	..	472	794	1,004	542	502	168	3,482	18,180	21,662
*											
1847	17,150,018	..	911	857	1,807	507	540	246	4,868	19,814	24,682
1848	17,356,882	..	899	1,181	1,270	396	395	398	4,539	18,497	23,036
1849	17,564,656	..	†4,222	746	1,045	311	547	265	7,136	17,962	25,098
1850	17,773,324	..	810	752	865	398	437	263	3,525	17,235	20,761
1851	17,982,849	2	1,004	756	997	521	440	389	4,109	17,879	21,988
1852	18,193,296	4	1,196	1,034	1,025	321	441	402	4,423	17,955	22,378
1853	18,404,368	2	1,114	851	1,008	266	609	171	4,021	18,859	22,880
1854	18,616,310	11	†2,261	984	1,015	498	525	151	5,445	18,078	23,523
1855	18,829,000	10	799	910	875	390	541	134	3,659	18,950	22,609
1856	19,042,412	12	836	732	850	374	484	119	3,407	17,100	20,507
1857	19,256,516	16	1,248	723	988	310	526	204	4,015	17,786	21,801
1858	19,471,291	248	822	1,303	918	476	598	332	4,703	18,390	23,093
1859	19,686,701	487	1,046	1,011	807	485	456	195	4,487	17,903	22,390
1860	19,902,713	262	562	486	654	480	450	138	3,012	18,727	21,739
1861	20,119,314	225	1,044	451	767	450	672	66	3,675	18,012	21,687
1862	20,352,140	241	622	729	920	482	608	80	3,677	17,774	21,451
1863	20,590,356	216	816	1,489	875	551	548	290	4,876	18,137	23,013
1864	20,834,496	262	881	1,426	965	409	411	369	4,714	19,070	23,784
1865	21,085,139	197	1,228	839	1,092	406	410	304	4,476	18,806	23,282
1866	21,342,864	141	†1,329	547	989	513	723	142	4,690	18,909	23,600
1867	21,608,286	120	1,606	569	781	395	559	116	3,647	18,254	21,901
1868	21,882,853	138	1,492	1,031	900	531	472	94	4,568	17,896	21,464
1869	22,164,847	118	969	1,347	829	465	635	71	4,194	18,131	22,325
1870	22,457,366	129	1,211	1,449	798	336	559	114	4,596	18,387	22,983
1871	22,712,266	131	1,136	818	636	469	456	1,018	4,643	18,026	22,669
Mean of 5 years, 1838–42		..	298	789	1,003	540	504	577	3,779	18,308	22,078
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" " 1843–51		..	†1,563	858	1,197	427	472	312	4,829	18,279	23,118
" " 1852–56		8	†1,241	902	956	379	529	195	4,191	18,189	22,379
" " 1857–61		268	944	796	827	448	524	167	3,983	18,664	22,650
" " 1862–66		221	†1,013	1,004	969	471	542	237	4,458	18,538	22,996
" " 1867–71		121	1,161	1,017	809	409	491	293	4,302	18,039	22,341

* Details not published in official returns for the four years 1843–46.
† Including an epidemic of Asiatic Cholera, general in 1849 and 1854, partial in 1866.

There is a gap from 1842 to 1847, but this is not our fault; the figures are not to be found in the Registrar-General's return. Instead of dealing with gross numbers, I shall draw your attention to the deaths per annum for one million of the population. Of diphtheria, there is not a single death recorded from 1838 till 1851, when it is debited with two per million. In a few years—viz. 1859—it amounted to 487, and since then it has fluctuated very much, but has never been under 100.

The diarrhœal diseases varied before 1847 from 225 to 472 per million; it then suddenly rose to 911, and it is in 1871, 1,136. In some cholera years it was much higher.

Let us now turn to some of the zymotics which are not so clearly traceable to excremental pollution. Measles, from 1838 to 1842, varies from 426 to 705, while in the last five years it varies from 305 to 531. Hooping-cough in the first five years was from 390 to 596; in the last five years, from 422 to 550.

Fevers, from 932 to 1,228 in the first five years; for the last five, from 695 to 900. Scarlet fever, during the first five years, from 380 to 1,260; in the last five years, from 569 to 1,449.

Small-pox for the first five years varied from 1,064 to 168; for the last, from 1,018 to 71.

At the beginning of the period the public were not fully protected by the compulsory vaccination. As regards fevers, it is to be regretted that they are all in one group. It would have been very interesting if, as is now the case, typhus and typhoid had been in separate groups.

In addition to looking at individual years, let us examine the average of five years as given in the lower part of the table. As regards diphtheria, the average in the first five years after its appearance is 8; during the next five years, 248; for the third five years, 231; and for the last five years, 121.

The diarrhœal group gives an average of 298 for the first five years; 1,569 for the next, including the severe cholera epidemic of 1849; for the third five years, 1852 to 1856 inclusive, 1,241, also with the cholera epidemic of 1854; from 1857 to 1861, 944. From 1862 to 1866, including the slighter cholera epidemic of the latter year, 1,015. During the last five years, the mean has been 1,161, which, contrasted with the first five years, shows us that while there has been no cholera in either period, the deaths in the diarrhœal group have increased almost fourfold.

We may affirm that sanitary science had no existence during the earlier years of this return, and I hope we may assume that the diminution in the percentage of deaths in all the zymotics in our table, except three, is attributable to the labours of the sanitarian.

How are we to account for the slight increase in scarlet fever, the striking increase in the diarrhœal group, and the addition to the list of a most deadly zymotic previously almost unknown? What changes have been made in the habits of the people which could in any way lead to so sad a result, after all the legislation and patriotic efforts to ameliorate the condition of the people, and to lessen the enormous amount of preventible death?

Certainly the only great change has been the mode by which we get quit of our excreta and refuse.

If any one had hinted to me ten or a dozen years ago that our present system of water carriage would prove a source of disease, I would have scouted the idea. Even when I began the study of this great question I had perfect faith in the system, and have only been driven from it step by step as new light gradually dawned on me, and the question was sifted to the bottom.

Typhoid fever is another of the diseases referred to above, and few, if any, of us now doubt that it arises from excremental pollution. Rarely a week passes that we do not see in one or other of our medical journals accounts of some outbreak—often indeed produced by impure water, but also frequently traceable to impure air. Caius College, Cambridge, was an example of this; and there was also a notable instance of it in Glasgow, carefully investigated by Dr. Russell, and clearly proven to have been owing to sewer-air getting into the houses.

I am sorry that time does not permit me to read Dr. Russell's report. As all the public wells in Glasgow are now shut up, typhoid fever (except in cases caused by impure milk) must be produced by breathing impure air, which may find entrance into houses by defective fittings in water-closets, sinks, and fixed basins, decay of the soil-pipe, transmission through the water in the traps, or emanation from privies or middens. Since 1865, deaths from typhus fever and typhoid have been separated in the Registrar's returns, and I find that the whole number from typhoid have been 1,759, averaging 195 each year; of infantile fevers (possibly the same disease) a total of 266, giving an average of 29 for each year; the rate per annum of both these diseases being 49 for each 100,000 of the population.

The highest sanitary authorities tell us that the decomposition of stools of patients suffering from some diseases enormously increases their infective power. Some investigators suppose that as regards typhoid there must be the addition of an infected stool to the sewers and wells, whereas others believe that the decomposition of ordinary excreta is quite sufficient to produce the poison, but I do not think this question materially affects my argument—decomposition certainly renders the poison more subtle and more terribly destructive. If this be indeed the case, then the true sanitary remedy must be to prevent this decomposition of excreta. If an epidemic of cholera were to occur, every medical officer of health would issue instructions for the treatment of the discharges of the patients so as to prevent their causing the spread of the disease, and we can easily imagine how imperfectly this would be done by a community not trained to do so. It is of very great importance then to inquire whether it is not possible to make provision for this being done at all times, which brings us to the consideration, very shortly, of remedial measures—and in doing so let us remember that fresh excreta is not injurious to health. We have seen how highly decomposition is so, and how greatly it increases the infective element in any stool.

We have also seen, or tried to prove, that flushing is difficult and seldom effective; that ventilation is a mere misnomer for dilution; and we have also seen a startling increase of diseases arising from excremental pollution. In view of all this, what is to be done? is there any remedy for such a dire state of matters? I believe there is, and also that the solution of the difficulty can only be arrived at by keeping steadily before us the necessity so often insisted on—viz., that no excreta shall be allowed to decompose. I have never propounded any scheme of my own as to the best manner of prevention, but have kept free from all bias, that I might be able to consider the various plans of others without prejudice.

I believe that the study of the economy of nature would help us in the right direction; we find no waste or loss there, the refuse of one order of organised beings supplying food for others.

The true rotation of nature is:—Earth the original mother, from it to plants, from these again to animals, and from animals back to the earth. This rotation we have departed from, and hence, I believe, arise our difficulties in regard to those secretions which are under our own control; in the case of those which are not we see them at once utilised. I suppose, if the disposal of carbonic acid had been left to ourselves, the whole world would have been suffocated long ago.

Of course it is difficult to apply the earth system in towns,

therefore some other method of preventing decomposition must be attempted, and the progress of what may be termed antiseptic chemistry renders this easier day by day.

The first point to be attended to is that excreta shall be kept separate from the rainfall, that the latter be returned to the streams as speedily as possible, and the former dealt with before it can decompose. Numerous methods have been proposed for effecting this, and I may mention a few of them: the Peat Drainage Company, the Seaweed Charcoal, the Manchester Carbon Company, Captain Liernur's pneumatic system; Moule's earth closet, and Hoey's limited cistern. As some of these will be brought under your notice in separate papers, I need not dwell upon such, but shall direct your attention very shortly to one or two which will not be so noticed; and first, Stanford's seaweed charcoal system, of which Dr. Wallace writes:—

'The process of Mr. Edward C. C. Stanford, of the British Seaweed Company, for the utilization of excrementitious matters by means of seaweed charcoal, has been before the public for some time and is now well known. This variety of charcoal has a wonderful power of absorbing gases—in other words, deodorizing, and is, I think, better adapted for this purpose than any other variety of charcoal, not even excepting that made from bones. There are, I understand, several large workshops where necessaries on Mr. Stanford's plan are in use, and they are said to be eminently successful.

'The following is the composition of a sample of the product of Stanford's closet system, received on the 16th ult. from Mr. Ellison:—

	Dry, per cent.	Original
Organic matter	11·16	3·74
Carbon	37·68	12·65
Phosphate of lime	3·54	1·19
Sulphate of potash	3·07	1·03
Chloride of potassium	·70	·23
Chloride of sodium	1·74	·58
Sulphate of lime	1·43	·48
Carbonate of lime	19·35	6·50
Carbonate of magnesia	3·92	1·32
Oxide of iron	3·61	1·21
Alumina	4·12	1·38
Silica	9·68	3·25
Water	...	66·44
	100	100
Nitrogen equal to ammonia	3·70	1·24

'The various ingredients in this mixture are partly those of the charcoal, and are partly due to the urine and fæcal matter, but the composition will vary with the length of time the charcoal has been in use, and the number of times it has been regenerated. In this system the valuable ingredients of the excrements are entirely preserved, with the exception, perhaps, of traces of ammonia, which will escape if the mixture is kept for any length of time exposed to the air.'

This system has been adopted in Glasgow and its neighbourhood in twenty-one public works, where upwards of 20,000 people are employed; also in several warehouses and offices, and in one hospital. As far as is known to me, the only town which has yet adopted it is Oldham, with 80,000 of a population.

Mr. Hoey has devised an apparatus which is intended to leave us with all the comfort and convenience of the water-closet, and yet at once to get quit of all the nuisance and dangers of that system.

It is not easy to describe mechanism without drawings; but I shall try and give some explanation of Mr. Hoey's plan.

To begin with, the water-closets are left just as they are; then the flush-pipe is not attached to the general cistern, but to one holding only one-fifth of a gallon of water, which takes two minutes to fill. When the bar of the water-closet is raised, the supply of this small cistern is cut off; so that it is almost impossible to waste water—it could only be wasted by some one raising the bar every two minutes.

The waste-pipe from the closet flows into a reservoir under ground, from which the excreta are removed by pneumatic pressure, without the slightest offence, and then taken to the country to be evaporated into portable manure. The advantages of Mr. Hoey's plan are obvious. Where water-closets are already in use, they leave our household arrangements as they at present are, and save an enormous waste of water. To this system it is sometimes objected that one-fifth of a gallon will not keep a closet clean; but in reply I may mention that more than five years ago I had a closet fitted up on this principle, and it has kept quite as clean as other closets in the same house where the supply is unlimited. Salt might be used as an antiseptic. Dr. Angus Smith speaks very favourably of it in his work on disinfectants, at page 78. At page 128 he tells us that it is seven times cheaper than chloride of lime, and fourteen times cheaper than carbolic acid; and at page 97 we read what was the effect of only two ounces on one cwt. of human excrement. The great advantages of salt are its cheapness, its

thorough efficiency, as well as its being itself a valuable fertiliser of soil, and amply repaying the agriculturist for his outlay.

Now, these and other schemes show a profit on paper, but I do not think that should be our first object. We ought to take a broader view of the question, and feel that this gigantic evil *must* be got rid of. We must not go on contrary to the laws of nature, lowering our health by breathing impure air, wasting our manure, swelling our death-rate, and robbing posterity.

If it is true that organic poisons producing disease may pass from sewage; if it is true that cholera, diphtheria, typhoid fever, and diarrhœa are traceable to the taking into our systems, by air or water, the results of decomposition of human excreta; if it is true that these diseases and others from the same cause swell our death-rate, and carry off some of the most valuable of our population, then I affirm that the only true sanitary solution of our difficulties is, that all excreta shall either be returned to the earth or subjected to chemical action, rendering decomposition impossible; and I am, furthermore, sure that if a tithe of the time, skill, and ingenuity, and one-thousandth part of the money, that have been devoted to water carriage, had been spent in investigations in this direction, the problem of the sewage question would have been solved long ago.

DESCRIPTION OF PLATE AT PAGE 534.

Fig. 1.—Pipe removed from a house where there was typhoid. Two months before it was taken out, the water-closet had been renewed, but the plumber had failed to detect the state of this pipe.—P. 7.

Fig. 2.—A piece of lead soil-pipe slightly corroded, which entered an iron pipe below a water-closet. The iron pipe much perforated, allowing an escape of sewer-gas, which produced fatal diphtheria.

Fig. 3.—Perforated soil-pipe from house where party died from phthisis.—P.

Fig. 4.—Wire cage, filled with seaweed or other charcoal, to put into the over flow pipe of cistern.—P. 8.

Fig. 5.—Soil-pipe laid open, in which so numerous were the perforations that very little of the lead required to be cut. The sides *a a*, *a a*, are irregular, owing to these perforations, and they may also be seen over the whitish part. The spaces between *a a* and *á á* are the parts of the soil-pipe covered with the whitish deposit spoken of in the paper. The part within the *b's* is the lowest segment of the pipe over which the sewage flowed. It is quite sound—not in the least decayed or worn.—P. 5.

Fig. 6.—Pipe from Edinburgh. It will be noticed that the solder has not decayed, *a*.—P. 7.

Fig 7.—Main descending soil-pipe, showing the perforations.

On the same. By BALDWIN LATHAM, C.E.

WHEREVER persons congregate together, forming villages, towns, or cities, an artificial state of things arises which demands special measures to be taken for their convenience, comfort, and health. The larger the place, and the more dense the population, the greater is the necessity for immediately and completely removing all decomposing or polluting matter from it. It is rarely possible to obtain sufficient water for a large town without going to a considerable distance and to great expense for it, and when used for ordinary domestic purposes, whether it be culinary, household cleansing, or washing purposes, or the vehicle for carrying away the alvine discharges, or for any other purpose, artificial means must be adopted for conveying it away. Provision must likewise be made for the removal of the rain falling upon the site of the town, and some method must be adopted for the scavenging or removal of the more solid waste materials produced in more or less quantity in every town.

The best method of removing all decomposing matter from the site of a town must be admitted to be that which performs its work most efficiently, most conveniently, most expeditiously, is the least costly, and gives the best results in a sanitary point of view.

So far as the drainage of a town is concerned, it will be admitted that three things are necessary in order to secure the health of the inhabitants :—

1st. The effectual drainage of its surface.

2nd. The drainage of the subsoil.

3rd. The means of conveying away the polluted water.

It is not now necessary to enter into such details as relate to a system of sewerage, as the expediency or not, of constructing one or more sets of sewers to deal conjointly, or separately, with the sewage, rain, or subsoil water. We will confine our attention to some matters in dispute at the present time as to which is the best method of conveying away the excreta and other noxious and decomposing matters from the sites of towns.

In approaching this question, in the opinion of the author too much stress is at present laid on the agricultural, rather than on the sanitary, aspect of affairs. It is on this account chiefly that a variety of schemes have been proposed and put in practice for collecting the manurial element of the population, with a view, if possible, to realise a profit therefrom. In deciding such questions, the authorities of towns should con-

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sider that there is more to be gained by a perfect system that shall preserve health and lessen the risk of death than by any system, however remunerative, if there are good and sound sanitary objections to it.

Various dry methods of collection have been proposed, such as the 'Eureka,' or pail system, formerly adopted at Hyde, in Cheshire, now in use at Rochdale, Manchester, and other places; modifications of this system, as introduced by Goux and Morrell; the earth-closet system (earth being used as the means of deodorising and fixing the manurial property in the fæcal matter; latterly carbon has been proposed and used as a substitute for earth with similar mechanical appliances); and Captain Liernur's pneumatic system of collecting the fæcal matter.

Of all the dry methods, the pneumatic appears to be the most simple, cleanly, and expeditious, and approaches nearest to the water system in regard to receiving the alvine discharges in closets, and removing it through pipes by pneumatic action. In these respects, therefore, it is certainly a very great improvement on the Eureka or pail system, or the earth-closet system, both of which, but especially the former, necessitate the carrying backwards and forwards of pails of filthy and disgusting matter.

Experience has now amply demonstrated that neither the Eureka, the earth-closet, nor other dry systems can be considered remunerative, while all dry systems require the fæcal and other decomposing matter to be left in the midst of the populations producing it for a certain period, thus increasing the risk of producing, or aggravating, a certain type of disease. The promoters of the dry systems advocate them as a panacea for all the evil connected with the subject of town sewerage, but, unfortunately, not one of the dry systems that have been introduced can obviate the necessity of a system of drains and sewers in a town. Considering, therefore, that water is required to be brought into a town for a variety of purposes unconnected with the conveyance of the alvine discharges, that it is delivered under such pressure that with properly constructed and well-ventilated drains and sewers it becomes the mechanical agent which will bear away innoxiously and harmlessly not only all fæcal discharges but the refuse of wash-houses, slaughter-houses, and manufactories, which cannot otherwise be dealt with, it does appear, in the author's opinion, that, after incurring the expense of procuring water, and providing drains, and sewers, for conveying this water, after use, from the sites of towns, the most should be made of it, and

that it is unnecessary and wasteful, after paying the cost of water which has the requisite mechanical power, to employ expensive auxiliary systems to remove the excreta, and other matters, by manual and horse labour, which can be more safely and expeditiously removed by water carriage. It is generally considered that a water-closet entails an increased cost in the shape of water. At first sight this appears a reasonable assumption, but experience has shown that, with proper appliances, no greater volume of water is needed for sanitary purposes in a water-closet town, than is now found necessary in towns which have no such appliances. The following table of ten water-closet towns, and ten middenstead or dry system towns, may be taken to show the result.

The average volume of water used in the water-closet towns is 31·6 gallons per head, while the average volume used in middenstead towns is 35·7 gallons per head.[1]

Names of Water-closet Towns	Quantity per head	Names of Middenstead Towns	Quantity per head
Alnwick and Canongate	30	Atherton	40
Barnet	30	Ayr	38
Croydon	56	Bradford	26
Liverpool	26	Bacup	33
London	29	Glasgow	50
Penzance	25	Lincoln	30
Plymouth	40	Malton	40
Uxbridge	20	Ormskirk	40
Warwick	30	Perth	30
Watford	30	York	30
Average	31·6	Average	35·7

In the case of water-closet towns, the largest quantity used —viz. 56 gallons per head—is at Croydon. This quantity is due to an error in the fittings, which was permitted when the works were first constructed. It has been amply demonstrated by practical experience in Croydon that, with proper appliances, 15 gallons per head per day is sufficient water for all purposes, and this, too, in a district in which the number of water-closets greatly exceeds the number of houses, many houses being fitted with two or more water-closets.

One objection has been raised to the water-carriage system, and that is, the difficulty of extracting, or utilising, the whole of the fertilising elements contained in sewage. When it is con-

[1] As the aggregate of the water-closet towns have a larger population than the middenstead towns, given in the table, the comparison worked out according to the table is still more favourable for the water-closet towns.

sidered that, up to the present time, it cannot be shown that any profit has been made, but, on the contrary, a loss is incurred, by removing the fæcal matter of towns by the dry or other systems, the cost of collection, manipulation, storage, interest and principal on capital employed, more than absorbs the intrinsic value of the article collected. It is of little importance through what channel the loss is incurred. In point of economy, the water-carriage will bear favourable comparison with any other system, and, taking into account what must not be ignored, that all water that has once subserved the uses of man should undergo some system of purification if it has again to be used, it will be seen that, where the dry systems are in operation, in addition to the loss in collecting the fæcal matter, the impure water will require treatment almost equal to that necessary for sewage containing the whole of the alvine discharges. In considering the question of the disposal of the sewage, either of water-closet or other towns, the analyses by the Rivers Pollution Commissioners show that, except a slight excess of organic nitrogen and carbon, the sewage of middenstead or dry system towns, contains quite as much polluting matter as that of a water-closet town. In many towns that have a dry system of conservancy, the sewage is really fouler than in a town that has a water-closet system. This is due in part to manufactories, and also to the fact that where dry conservancy is in operation, only a small proportion of the whole of the fæcal matter of the population is secured, the other portion, by some means or other, is lost, and eventually finds its way into the sewers.

The case, as between dry conservancy and water-closets, stands thus:—In every town in which a dry system of conservancy is used, the town authorities entail a large outlay in collecting, manipulating, and dealing with the fæcal matter, as separate from the sewage proper. They do not escape having to deal with the polluted liquid at the outfall, which requires just as much care and treatment as if it contained the fæcal matter of the population, its chemical constituents being almost identical, and the polluting matter almost as great as in the case of a water-closet town. If, therefore, any process of treating the sewage of a water-closet town is unsuccessful, and entails an expense upon the constituency, it naturally follows that a double expense is incurred by those towns which adopt two systems—the sewer system, which is absolutely necessary for carrying away the foul water, and the system which deals with the alvine discharges of the population by some separate method.

Much of the want of success, and non-progress in sanitary matters of late years, are due to erroneous impressions that sewage is a material of great value; and until means or modes are known for securing this value, authorities are unwilling to take steps for promoting schemes of sewerage, as they appear to be more impressed with the idea of possessing some hidden treasure, which, by the way, cannot be found, rather than by facing the difficulty, and looking at the question from a sanitary point of view, and taking the profit that will be realised by the prosecution of works of sewerage, as arising from the saving accruing from the prevention of the loss of health, or premature death, from preventible disease. From the author's experience, it would appear that, it is the most profitable to a town to adopt the water-carriage system in its entirety. The treatment of the sewage at the outfall, although of primary importance, should have secondary consideration, having regard to the health and prosperity of the district to be treated. That sewage has a value, cannot be gainsayed. That value, however, differs immensely in different localities. The value assigned by chemists to manures of this class, universal experience shows, is not its commercial value. The farmer finds in practice that it pays him better to purchase high-class manures, or manures which have been specially prepared for particular crops. Bulky manures never realise, commercially, the value assigned by the chemist. As an example, for farm-yard manure, valued by the chemist at 15*s.* per ton, a farmer would rarely give more than a third of this amount for it. Night-soil, which has also been valued at 15*s.* per ton, seldom realises more than 3*s.* per ton. The full value of sewage, whether applied directly to land, or manufactured into a portable manure, can never be realised, unless fortified with the several ingredients it lacks. Liquid sewage is a manure poor in phosphate but rich in nitrogenous compounds, while manufactured sewage manure is poor in nitrogenous compounds and potash.

Much as is the sanitary good derived from the sewerage of towns, and which will take place as long as sewerage works are properly carried out, it cannot be denied that, a large number of the streams of the country have been polluted with the sewage of towns, the refuse of manufactories, the foul water from mines, &c., so much as to become unfit for subserving the purposes of man, and in some cases for the watering of cattle. In a sanitary point of view, the evils arising from the pollution of streams cannot always be directly traced, yet there can be but little doubt that, foul decomposing matter cast into the streams of the country causes disease, and is baneful in its effect on the

health of the inhabitants living on their banks, especially upon such as are compelled to use such water for dietetic purposes. It is therefore necessary that works should be carried out, and measures taken, to purify the sewage discharged into streams used to furnish a supply of water in districts below. Various attempts have been made to effect the complete purification of sewage, and on this point the interest of both the sanitary reformer and the agriculturist are one, as the complete purification of the sewage means, the abstraction of the whole of the decomposing and fertilising elements, which, if completely effected, will produce a great sanitary good. The question of the purification of sewage is one that must arise, and is totally independent of the system of collecting the fæcal matter now in operation in some towns. It has been conclusively shown that, with a dry system of conservancy, sewers and drains are necessary, and that sewage is produced which needs as much purification as in the case of a water-closet town. The fear at the present time is that, there may be too much generalising, and an attempt made to lay down defined standards of purity which are to be made universally applicable, but which, under many circumstances, are totally unnecessary, and would lead to immense expenditure and serious loss to many communities. There are circumstances in which a high standard of purity is absolutely necessary, and, on the other hand, others in which the crude sewage may be most advantageously, and economically, got rid of by being discharged into the sea, and between these two limits there are gradations of purity required. When high standards of purity are required, experience shows that they can only be obtained, with certainty, when sewage is applied to land, and in other cases where land is unavailable or limited recourse must be had to chemical treatment.

The processes which have been proposed for treating sewage may be said to be of two descriptions, viz., artificial and natural. The artificial process includes both the mechanical and chemical treatment, while the natural process may be put down as irrigation, and intermittent filtration. Of the materials which have been used for the mechanical treatment of sewage, it is hardly necessary to speak. It is admitted that such treatment can only be considered as an auxiliary to the chemical, or natural, processes, or to both conjointly.

Of the chemical processes the lime process is the oldest, having been patented in 1846 by Higgs, and is probably, when efficiently carried out, one of the most successful in clarifying sewage. The albuminous matter present in sewage coagulated by lime clarifies it much in the same way as does isinglass

coagulated in wine, or the white of egg in coffee. Lime also acts by neutralising the free carbonic acid which abounds in fermenting sewage, and which holds some of the earthy salts in solution, the lime added in this process being converted into a carbonate, and is precipitated in the deposit. The lime used in the treatment of sewage should always be perfectly fresh. To sewage of ordinary strength about 16 grains per gallon are required.

Treatment of Sewage with Salts of Iron.—In the lime process, the action of the acids in the sewage upon the materials used, produces precipitation, but, in the application of the various forms of iron, it is the action of the alkalies of the sewage that produces precipitation. When a salt of iron is added to sewage, a precipitate is formed, composed chiefly of peroxide of iron, which is separated by the ammonia, and other alkalies of sewage, into an extremely flocculent precipitate, which drags down the suspended matters. The oxide of iron has, moreover, an affinity for organic matter, therefore a portion of this matter which is in solution, is carried down with it; the salts of iron also carry down the phosphoric acid present in the sewage. Iron salts also act as a deodoriser, as sulphuretted hydrogen is removed by being converted into a sulphate, or sulphide, of iron. Iron is an antiseptic, and will preserve organic compounds from speedy decomposition. The first patent for the treatment of sewage with salts of iron was taken out by R. Dover in 1851.

Magnesian Processes of Purifying Sewage.—The action of magnesian salts on sewage is complex, but the resulting precipitate is probably one of the most valuable of all precipitates that do not derive their direct agricultural value from the agents used, as both phosphoric acid, and ammonia, may be precipitated in small quantities. The salts of magnesia that have been proposed for the treatment of sewage are, phosphate of magnesia, superphosphate of magnesia, chloride of magnesia, nitrite of magnesia, sulphate of magnesium, burnt and slackened magnesian limestone, carbonate of magnesia, sulphate of magnesia, and carbolate of magnesia. Mr. T. J. Herapath's process, which was tried some years ago at St. Thomas's, Exeter, is an example of the magnesian process. It was not remunerative, and was abandoned. In a patent taken out by Dr. Angus Smith and Mr. McDougall, in January 1854, they state, speaking of magnesia, 'it has the property of rapidly separating the two substances which constitute manure in urine, sewage, and other organic refuse matters, but it was not used for that purpose because of its inefficiency as a deodoriser.' 'These substances are phosphoric acid and ammonia, with which magnesia combines

to form the ammonia phosphate of magnesia, a scarcely soluble compound, of great value as a manure, and well known to chemists.' They add, however, in their patent, 'The facts relating to the acts of magnesia on substances containing phosphoric acid and ammonia, have been for some years familiar to chemists, and, therefore, we do not claim its use as our invention.'

Alumina Processes.—The alumina processes for purifying sewage have been in use for many years. In France it has been largely used as a means of purifying water for domestic purposes. When salts of alumina are added to the sewage for the purpose of producing a precipitate, the alumina decomposes the bi-carbonate of lime, which gives rise to the formation of sulphate of lime, which, with sulphate of potassa, remain in solution, while carbonic acid is evolved, and hydrate of alumina being precipitated in a flocculent form, drags down various mechanical impurities. Alumina also combines with the phosphoric acid and is precipitated, and most of the phosphates of the sewage are secured. Alumina also enters into combination with certain organic compounds, producing insoluble matter, which it precipitates. This latter property of alumina is so well known, that it is largely used as a mordant for fixing colours, as it combines with cotton, wool, &c., with such affinity that washing will not remove it. When lime is used as an adjunct to precipitate sulphate of alumina, it deprives the latter of its acid, when it becomes insoluble in pure water, and is precipitated as a hydrated oxide of alumina, which envelops the suspended impurities, dragging them down with it. This precipitate forms a sort of gelatinous substance, which is readily dissolved in solution of soda and potassia, hence some portion of the alumina remains in the effluent water after treatment. Professor Way, and Dr. Voelcker, have shown that clay (the base of alum) has the power of absorbing chlorine salts, therefore, when this material is used for precipitating sewage, a small amount of chloride of sodium will be removed from the sewage. The ingredients necessary for the successful carrying out of the alumina process, are so universally distributed over the country, and are so cheaply and easily procurable, that this process will commend itself on this account. This process was first patented by H. Stothert in 1852.

Phosphate Processes of Treating Sewage.—In the phosphate processes, a material of considerable agricultural value is used, consequently, it is supposed that a manure of great intrinsic value is secured in the precipitate. Although the precipitate undoubtedly has a greater value than the precipitate produced

by any other process, increased value is not derived from the sewage, but from the ingredients added to it, and in the addition of these fertilising ingredients, they suffer a degradation in value by admixture with the inferior material precipitated from the sewage. Moreover, in all the phosphate processes, it is necessary to add phosphates to the sewage in a soluble form, which is usually done by dissolving phosphate of lime, or some mineral or fossil phosphate, in acid. This addition of acid greatly increases the value of the phosphates, but when applied to sewage, the acid has to be neutralized, and the phosphates are again precipitated in a less valuable form; in fact, this process of passing soluble phosphates through sewage, causes them to lose 25 per cent. of their value. On account of the degradation in value of the phosphates, and also on account of the materials lost in the process, this system of clarifying sewage can never, in the author's opinion, be made commercially successful. The process is, however, advantageous, for it may be used very successfully in clarifying sewage previous to its application to land. It is now well known that sewage is a manure, poor in phosphate and potash, and rich in nitrogenous compounds, and that, owing to the nitrogenous compounds present being so disproportioned to the other ingredients of value, in utilising the other ingredients, most of the nitrogen is lost; consequently sewage in its normal condition can never be fully utilised upon land, so it has been proposed to fortify it with the ingredients it lacks, and for this purpose, the phosphate processes of treating sewage have been commended. From what has been pointed out, it is clear that, if we wish to get the full value of the phosphates, it is better to place them direct on land, rather than, in the sewage; but as a set-off against the degradation in their value, the addition of phosphates to sewage deodorises and clarifies it, so as to diminish the risk of nuisance arising from its application as a manure. As a precipitant, the phosphates act like alumina and salts of iron, and they are rendered soluble by an acid which is either neutralised by the alkalies of the sewage or by the addition of an alkali, when an insoluble precipitate separates from the sewage, which drags down the suspended matter present. In the simplest form, if bone, or bone ash, is treated with sulphuric acid, a soluble superphosphate of lime is formed, but if the acid is neutralised by caustic lime, insoluble phosphate of lime is precipitated. If phosphate of alumina is dissolved in acid, it will be rendered soluble; the addition of lime neutralises the acid, and the phosphate is again precipitated as an insoluble phosphate of alumina, and the same action takes place when

other earthy bases combine with phosphoric acid; the precipitated phosphates, however, are of more value than the original insoluble phosphates, as they are supposed to be brought into that state which they would naturally assume, on being applied to land, but in no case are they so valuable as in the intermediate state, just after they have been treated with acid. The principal object which has been sought to be achieved by more than one phosphate process is, the abstraction of ammonia from sewage, by a process long known to chemists. It consists in the application of phosphatic and magnesian salts, which have the power of combining with ammonia, as before referred to. In practice this has never been found to entirely succeed with sewage, and the reason for it is that this triple salt readily dissolves in water containing common salt, or salts of ammonia. It is also soluble in water charged with carbonic acid. There is nothing particularly new in the modern phosphate processes, which were thoroughly investigated some years ago by Sir J. Murray, M.D., and in 1849, a paper was read before the British Association, by Dr. Buckland, then Dean of Westminster, who, after tracing the formation of coprolites, and showing that clay, marl, and lime were the agents used by nature to absorb phosphoric acid produced in the process of decomposition, he suggested that these agents should be used for absorbing the phosphates of sewage by combining with them, and so deodorising the sewage. The first patent for a phosphate process was taken out in 1858, by G. L. Blyth, Consulting Chemist to the late General Board of Health, and since that period a large number of patents have been secured.

Many other processes have been proposed for treating sewage, such as materials for absorbing, evaporating, freezing, &c., and the precipitates in turn have been proposed to be manufactured into manure, and fuel, as well as converted into food for cattle.

Of all the processes which have been adopted for the purification of sewage, there is no process equal in efficiency, and permanency, to the application of sewage to land. All the chemical processes have hitherto failed to completely purify sewage under favourable circumstances, and fail entirely, at times, in treating an article, not only varying in quantity, but extremely variable in quality, and it is therefore most difficult to carry out any chemical process which requires an exact amount of chemical ingredient to be added to sewage of an unknown quality or quantity; but in the irrigation system, increase of quantity, or variation in quality, is readily adjusted. Irrigation, pure and simple, is almost totally independent of

seasons, and in some cases intermittent filtration through land or artificial filters may be adopted, but it is desirable that, with intermittent filtration areas, the success of which is due to atmospheric air contained in the interstitial spaces in the soil, that they should be, in some cases, protected from the weather, so that in continuous wet weather, the soil shall not be deprived of the air necessary for the oxidation of the polluting matter contained in sewage.

The author is aware that it is impossible, in the limited space of a paper of this description, to completely elucidate the subject, or supply the details, of works of sewerage, or modes of purifying sewage, and the paper must, therefore, be looked upon, simply, as a *resumé*, the object of which is to open up discussion on the all-important point of town sewerage.

DISCUSSION.

Mr. P. H. Holland (London) said we were called upon to believe that diarrhœal disease had increased four-fold since the present system of water-closets had been introduced into this country. He would not question the figures, but he complained that no account had been taken of the imperfect system of registration twenty years ago, which alone rendered the comparison perfectly fallacious. Within his own time two-fifths of the number of deaths were not under medical treatment at all, and the cause of death had to be guessed at from the imperfect information which the attendants could give. The consequence was that, of some diseases, a very small proportion got registered at all. Diarrhœal disease was one of those causes of death which would be likely to be misconceived by non-medical reporters, and deaths arising from it would be sure to be attributed to other causes; and he did not doubt, therefore, that the percentage should have been very much higher than it really appeared. Scarlet fever, on the other hand, being popularly known would be tolerably correct. In his own town a large number of cases had been registered as convulsions, in which convulsions were the effect of the disease and not the disease itself, and one informant would ascribe to convulsions that which another would ascribe to the cause of the convulsions. He did not believe that there had been a large increase in diarrhœal disease, still less did he believe that the water-closet system had tended to increase it. He might mention some remarkable instances of the advantages produced by the adoption of the water-closet system. The city of Salisbury used to be known as one of the worst places in the country for diarrhœal disease; in fact, diarrhœa was known at one time by the name of the 'Salisbury Complaint;' but by the introduction of this system, combined with a good water supply, it had now become a healthy town, the death-rate being only two-thirds of

what it used to be, and diarrhœa had almost ceased to exist within it. Merthyr was another instance in which the introduction of the water-closet system had been followed by a very large decrease in the amount of diarrhœal disease. Everyone knew that the presence of excrementous matter in or near a house was likely to be a source of disease; and he thought Dr. Fergus had done good service in calling attention to, and giving such striking illustrations of, the evils arising from the use of leaden pipes for the conveyance of sewage. But no one who had not a leaden head would think of using such a pipe in the present day, and they would never have been used at all had the plumbers not been called into consultation, earthenware and iron pipes being much less expensive. The great question was, is it better for us to adopt some plan which will have to be tried over again from the beginning, or to endeavour to perfect the water-closet system? He had seen the dry system often tried, but it was always with the same result. It was quite successful as long as the inventor watched it himself, but as soon as his personal attention was withdrawn it utterly failed. In his own place he found that this was the case, and that at last it became intolerable. It involved constant individual attention, and though it might be useful in a camp or a hospital, it was impracticable in towns where everybody had his own way, and that very often a wrong way. He must say he entirely disbelieved in the basis of Dr. Fergus's argument.

Dr. Stevenson MacAdam (Edinburgh) had given a good deal of attention to the subject, having two years ago had occasion to consider the whole question in relation to Edinburgh, the sewage of which was poured into the water of Leith. They had, therefore, to consider how best it could be purified. Fresh sewage was not that polluting substance which people generally believed; and with regard to its carriage by means of water, if we could always depend upon the water carrying away the whole of the sewage, he had no doubt that in the interest of the town itself the system would be a very excellent one for getting rid of the sewage; but in the first place it had been shown that the water did not completely take the sewage away. There was also another question involved. When the sewage was carried away by means of water it polluted the neighbouring stream. He had had occasion to make an examination of sewer gas, and he found that not less than 90 per cent. was inflammable. In regard to the method of purifying sewers, there could be no doubt that we ought to have flushing stations, where quantities of water could be lodged and thrown into the drains in large volumes, so as to carry the sedimentary matter away with it. He could not agree with Dr. Fergus as to the inefficacy of ventilation. At Portobello, where he resided, it was found that sewer gas got into the houses, and they provided against it by adopting a system of ventilation, in which the sewer pipes were made to pass through the furnaces of the gas works, and this proved of great advantage. He differed from Mr. Holland's view that the water-closet system had done no harm. In regard to Scotland, the well-water of the villages had been completely destroyed by its introduction, and the only way to rectify the evil would be to introduce a proper water

supply. He had been struck on noticing in one of the streets of Glasgow the system of laying down asphalt below the ordinary pavement. It seemed to him that if gases rose through the ground from sewer pipes and could not get through the asphalt, they would be driven to find their way through the ground immediately under our houses. He believed this asphalt to be impervious to gas, and therefore that the sewer gases would enter our houses. The more he thought of it, the more he was inclined to believe that the water-closet system was a bad one, and that, if we had not carried it out too quickly, we had carried it too extensively. He was not prepared to say what should be substituted for it, whether the earth system entirely or any other, though in parts of Edinburgh the pan system had been adopted with great advantage, and in Lauder the earth system was adopted also advantageously. He was, however, not prepared to give a preference to one system over another, but he agreed with Dr. Fergus that the water-closet system should be greatly limited, if not done away with altogether.

Mr. W. C. Sillar (London) understood the question to be, what is the best method of disposing of the organic matter which goes down to the sewers in towns? Two theories had been propounded, land carriage and water carriage; and if the sewers could be kept without offence, he had no doubt that the latter was the better mode of conveyance; but this, we all knew, was not the case. He advocated a process which was now well known, called the A B C system, which differed from other systems in first clarifying the liquid sewage by means of a mixture of blood, charcoal, and clay; it was then treated with sulphate of alumina, which precipitated a quantity of substance valuable as manure. He read a letter from Alderman Tatham, of Leeds, dated 1873, intimating that it had been fully tried in that town for eighteen months, and had proved successful; so much so, that the Street Committee were unanimously of opinion that it was the best system. The Corporation of Leeds had spent 60,000*l.* in the works necessary to carry it out. The Native Guano Company had invested 100,000*l.* in demonstrating the practical character of the A B C process, and were so satisfied with it that they came forward and subscribed a further sum to carry it out. The solid matter produced from the sewage by the A B C process was absolutely free from offensive odour, and is called native guano. It has also the remarkable power of absorbing every other kind of offensive matter. It had been tried on condemned fish and other such matters, and a horse had been buried in it, and, after a few weeks, not a vestige of it remained.

Mr. John Towle (Oxford) said, that when 60,000 persons were sacrificed each year, owing to preventible disease, which spared neither high nor low, it was high time to take up the subject in earnest. He blamed the professional engineers for the result, and instanced the case of Norwich, where it was expected that 25,000*l.* would have finished the sewage works, and yet they were now spending their second 100,000*l.*, and were no better than when they began. Lime was the thing to deodorise sewage, but there was a difficulty in applying it. The whole country, however, was reeking with fever, and something must be done.

Captain LIERNUR (The Hague) said that Dr. McAdam was right when he told them that fresh sewage was not the polluting substance which many people supposed. He had devoted a great deal of attention to the question, and he believed that the remedy for the evils of sewage did not lay in treating the sewage at its outfall. There was a way of keeping the excrementous matter and the pollutions arising from factories out of the sewers altogether. With regard to the latter source of contamination, he advocated the principle that every man should attend to his own business. It had been said that water was the cheapest mode of conveyance for sewage, but he thought it would be found very expensive if it was required to remove all the fœcal matter, and that air, which is found everywhere, was very much cheaper as a means of conveyance. Why was it necessary to convey everything by means of one sewer? He thought the theory was entirely wrong. People told him that to have separate sewers for each description of sewage would be very expensive, but it was not fair to put it in that way. Removal was only a question of transport. Suppose that a railway company had only one description of carriage for passengers and freight, and some one suggested that it would be much better to have three, and that the damage caused by having only one would cover the cost of ten carriages, surely the railway company would not be justified in refusing to build the other descriptions of carriage because they would cost too much money! The manufacturing elements of sewage should be kept out of the drains or purified before they were allowed to enter, because no one knew so well how to purify a polluted water as the person who put the pollution into it; and so long as this was not done, it would be necessary to write out a new receipt every day, as each new kind of manufacture was commenced. He then proceeded to explain his pneumatic system, which is now in operation in Leyden and Amsterdam. In a building in any convenient part of the town is placed a steam engine which works an air pump, so as to maintain about three-quarters vacuum in certain air-tight reservoirs sunk below the floor. From these reservoirs central pipes radiate in all directions, following the principal streets, and on or near these pipes, at intervals, street tanks are placed below the pavement. From these street tanks, but separate entirely from the central, pipes are laid along the street communicating by short branches with the closets of each house. All the junctions of pipes with tanks are furnished with cocks or valves which can be opened or closed at pleasure, like water mains, and are got at by cock boxes, and turned by keys in the ordinary way. Each street tank is also provided with a small pipe, upon which the operator can fix a vacuum pipe for his guidance. The vacuum created in the central building reservoirs can thus be communicated to any given street tank, so as to furnish the motive power by which, when the cock on any street pipe is opened, all the closets connected therewith are simultaneously emptied into the tank. When the contents reach the street tank they are in like manner forced through the central pipes to the reservoirs under the central building, and thence transferred by means of vacuum power to hermetically closed tanks above the floor of the building. From these the

matter is by air-tight pipes distributed to the various drying retorts for its reduction to a state of powder, or is decanted in a fluid form into barrels for immediate transport to the country. Both processes are carried out by means of hermetically closed apparatus, so that any escape of noxious gases is utterly impossible. The gases formed are discharged into and burned up by the furnace. The heat of the engine was found sufficient to evaporate to perfect dryness the whole of the sewage drawn to the principal reservoir, the operation being conducted in vacuo. And this consisted of the excreta of the water-closets, the slops of sleeping rooms, and the solid refuse from the kitchen. The rain water and the liquid kitchen slops are conducted by a completely separate sewer into the river.

The PRESIDENT of the Department said he had received reports from friends of his own, Professors of Universities, with respect to Captain Liernur's system, and he found a general agreement in its favour, so far as regarded Leyden. The reports concerning Amsterdam were, however, not so satisfactory.

Mr. WANKLYN (London) said that without going into reasons, he would state the conclusion at which he had arrived, after very careful consideration, viz., that no mode of disposing of sewage existed so easy as, or attended with less immediate disadvantage, than the water-closet system. Even Dr. McAdam, who took the contrary view, and regarded the water-closet system as a great evil, admitted that sewage, properly speaking, was not the foul liquid it was said to be. It was possible to mix excreta with so much water that it hardly gave off any gas, and was perfectly innocuous. Occasionly, however, sewage ceased to be sewage, and it was to prevent this that their operations must be directed. The large size of some sewers, and, in consequence, the accumulation of the solid excremental matters in the corners, was one of the chief causes of foul sewers; and he thought the difficulty it involved could easily be got over by the engineers, if they tried. With regard to the final disposal of sewage, he held that the proper way would be to filter it rapidly, or apply some rapid, precipitating process, from which they could get a solid or semi-solid, which could be used as was found suitable, the remaining liquid being sent into the nearest river, where it would do no harm whatever.

Dr. BOND (Gloucester) thought it would be generally admitted that Dr. Fergus had done good service in drawing attention to the want of ventilation in sewer pipes, and showing the dangers arising from the present system. There were, however, serious difficulties to be encountered in the ventilation of pipes, chiefly owing to their small diameter and the number of bends in them. The system of ventilation recommended by Dr. Fergus resolved itself into a question of the difference of tension between the external and internal atmosphere of the pipe; and under even the best system that could be devised it was impossible to prevent a return draught, and this would bring the sewer gases into our houses. There were many cases in which ventilation was quite impracticable. Closets were so situated that it was impossible to carry the soil pipe up to the top of the house, and in such circumstances (and they were of frequent occurrence) the only remedy

seemed to be a closet disinfectant, or provision of some simple means of charging the liquid in the trap with some efficient disinfectant. His own experience taught him that no one system could be adopted in all places, and the difficulty had to be dealt with in the least expensive manner consistent with efficiency. The true basis of attacking the question was that so ably stated, for the first time to his knowledge, by Dr. Liernur, that every individual should be primarily responsible for getting rid of his own difficulties. Certainly until sanitary law was amended in such a way as to give sanitary authorities complete power over their own sewers, to say if excremental matter should be admitted into them, it was idle to discuss whether it was better to have one system of sewers for water and another for excrementous matter. Any manufacturer could pour down what he liked into the sewers at present, and this state of things should be remedied. It would produce a considerable outcry to compel the manufacturers to purify or get rid in some way of their waste products; but in the end it would entail very little expense upon them. So long, however, as they were not called upon, they would take no trouble in the matter. Everything rested upon the narrow foundation that sanitary authorities should have full power of determining all matters relating to sewage.

Mr. W. R. W. Smith (Glasgow) said that Captain Liernur's system, with the addition of a little water, had been in operation in a part of Glasgow for two or three years, and had worked very successfully. Mr. Latham could never have considered this question with reference to large towns, or he would not have suggested that the conditions which applied to such places as Merthyr Tydfil might also be put in force in such a town as Glasgow. He quoted from the calculations of Messrs. Bateman and Bazalgette, that one acre of grass could take up 3,400 tons of sewage per annum, and one acre of cereals 1,100 tons per annum; and applying this to Glasgow he found it would require 15 square miles of grass land, or 75 square miles of land cropped with cereals, to take up the present minimum quantity of its sewage, and 25 square miles of grass, or 125 square miles of land cropped with cereals, to take up the present maximum quantity. But, supposing that the present rate of increase in the population of Glasgow was maintained, it would require in twenty years' time no less than 35 square miles of grass, or 180 square miles of cereals. Where, he asked, was the necessary land to be obtained, and what would be the state of the country with 35 square miles under water? Then they had been told by the Commissioners who had been appointed to investigate the subject that sewage farms must be conducted with great care. He was satisfied that the irrigation system could never be successfully applied to large towns such as Glasgow.

Mr. E. C. C. Stanford congratulated the department on being presided over by one who was a prominent legislator and eminent in science, because both the law and the science on this subject needed amendment. They suffered under one law which compelled them to drain, and another which prevented them from draining; and Bradford was a remarkable example. In London, where they looked not only for the law on the subject, but for the best example of how to keep

it, they simply got over the difficulty by drinking their own sewage, carrying it out by one tide only to be returned by the next. Why should they not keep the feculent matter out of the sewers altogether? He was sure that if the time which had been spent on the best means of disposing of sewage at its outfall had been directed to this branch of the subject, the sewage difficulty would have disappeared long ere this. Whenever they had spoken of the dry system they had referred to the earth method of dealing with sewage. This, he thought, was very unfair, for the dry system did not necessarily mean the earth system, which indeed was not applicable to all cases. He advocated the use of charcoal, and believed that the difficulty of obtaining a supply of that article could be got over by utilising the sewage itself. So far from the system of irrigation being an advance in science, he thought it was going backward at least a hundred years. The system of Captain Liernur was an advance.

Mr. Adam Scott (London) noticed the remark of Mr. Latham that the liquid sewage in places where the dry system was in operation was very nearly as much polluted as that according to the water closet system; that by the pail system which Mr. Latham advocated out of twenty-nine or thirty ounces which each person produces daily only about seven or eight ounces are recovered, the rest finding its way into the ordinary sewers. The President had referred to the pneumatic system in reference to Amsterdam, and stated that its adoption there had not proved so satisfactory as he might have expected from its success at Leyden. In the former place, however, it had had to encounter much opposition from the friends of the water system, in fact there had been a war of systems. Arbitrary changes had been made without consulting Captain Liernur. The machinery for existing services was out of proportion to the pneumatic power, and in deviation from the original plan. He had received, in reply to questions asked of the engineer, an assurance that the system was quite effectual for the purpose intended. That where Captain Liernur's plans were carried out nothing offensive could be observed, and that there were no drawbacks to the system in any essential sense.

Mr. William Hope, V.C. (London), had listened with great pleasure to the paper of Dr. Fergus. He had himself found leaden pipes eaten away, and had come to the same conclusion that they were not the right kind of pipes for water closets. But he did not come to the conclusion that because lead pipes were bad, therefore water-closets were bad also. With regard to the startling statement of the great quantity of land required to carry out the irrigation principle, all he could say was that the calculations upon which the statement was made were purely imaginary. When the commission of eminent engineers were called upon to report, he placed his land at their disposal, and offered to make his house their hotel, and gave them every facility for carrying out their work, but they did not avail themselves of the offer, and the result was that they did not carry their experiments far enough, and the figures are based upon a wrong system altogether. The quantity of sewage required for a given crop must not be taken

into account, but rather the number of persons per acre. It mattered very little whether the feculent matter was taken out or not, as it only represented about one-sixth of the whole. But what everyone seemed to lose sight of in advocating dry systems is, that the great bulk of the water which comes into a town at one end pure runs out dirty at the other end. Captain Liernur had said that he would call upon the manufacturer either to purify or dispose of his waste products. He (Mr. Hope) did not think it was a practicable proposal. Captain Liernur had also stated that the rainwater and other slops were perfectly harmless and might go into the rivers. His opinion was that these waters would be found to contain urine and other foul matter which will of necessity go into the sewer. It was not difficult to draw pictures of housemaids going about their duties and collecting soapsuds in one pail and urine in another. He had started with the very largest town, London itself, for the purpose of applying the irrigation principle. The scheme was accepted by the Board of Works, and an Act of Parliament obtained for it. A select committee had reported that his scheme was a useful and profitable one, and that no more useful and profitable system could be devised. The reason why irrigation has not been carried out almost universally over this country was that the company which was carrying it out had got into the hands of those whom he would not characterise further than by saying that they had squandered a vast deal of money in constructing works which would be of no use to any person, and had been endeavouring to extract money from the public on various grounds. As to the lodging of sediment in the pipes, that arose from the fault of town counsellors. For the sake of economy the old-fashioned brick sewers, which were meant to convey rainwater only, were used as sewers, and no doubt sediment would lodge. He found also that sewers were made ten times as large as they ought to be. If a small glazed pipe, with a reasonable pressure, was adopted they would hardly have any sediment at all, and the pipe might with advantage be constructed of iron.

Mr. William Botley (London) said that since the new water supply and the present sewage system had been introduced into Salisbury the death-rate had decreased from 27 to 16 per 1,000. With regard to the question of the agricultural value of sewage, he hoped to see Mr. Hope's opinions carried into practice, not only in Glasgow, but throughout the empire. He had seen land which, previous to the irrigation plan being applied to it, was letting at from 5*s.* to 25*s.* per acre, now, after the application of irrigation, let at 25*l.* per acre; and when it was considered how the death-rate had decreased where it had been successfully carried out, he felt that Mr. Hope was justified in his statements, and he agreed with Mr. Hope that the figures quoted by Mr. Smith were unreliable.

Mr. Charles Elcock (Manchester) said Mr. Latham was mistaken in saying that the Eureka system was in operation in Rochdale and Manchester. It had never been really alive in Rochdale at all, and the system was doomed soon after its introduction. Sewers must exist as long as the towns themselves, but they must be confined to their

original purpose. It was necessary to get rid of the organic matter in a way most innocuous to health. There was a means of accomplishing this object by a dry system. A dry system did not necessarily mean the dry earth system. The sweepings of the streets were now looked upon as a nuisance, both on the score of health and with regard to the difficulty of getting rid of them; yet when burnt they would produce sufficient charcoal, at a very small cost, to deodorise the whole of the excrement of the town. This could then be reduced to a fine powder, and would prove a valuable manure.

Mr. Edwin Chadwick, C.B. (London), said that in the year 1850, or thereabouts, an examination was made of all the experiments that could be collected throughout Europe, including England, on the question of the application of the excreta of towns to agricultural production, and eminent agriculturists and horticulturists were examined on the question. At that time the general conclusion from the evidence was, that the best way of receiving excreta liable to enter into decomposition was in water, that the cheapest way of removing it was in water, that the cheapest and best method of applying it to agricultural production was in water, and that the intervention of any process on that method of removal was a waste of labour. Since that time there had been continued demonstrations and attacks—at least uprisings of chemical and other theories, to introduce various and dry applications. Since that time also all these methods had been tried in France; in fact, he did not know of any one experiment which had not been tried, either here or on the Continent. Inquiries had been conducted by independent officers of science, who were competent to appreciate the facts, who had no engineering, or chemical, or any other trade to serve, but merely the public, and they have reported responsibly on the various trials made. The latest report just made by the French experimenters was to the effect that the best way was to return to every principle laid down in 1850. In Germany, too, scientific men had been called upon to lay down a system of drainage to the City of Berlin, and to report upon the application of sewage to vegetable production; and they had preceded the conclusion by examination of what has been done here or attempted to be done elsewhere, and they have come to the same conclusion, that the application must be direct by water, and they had recommended the very plan that was proposed, with some modification which Mr. Hope had adopted. The plan had also been advocated by the Sanitary Commission, and it had been carried out with success in Dantzic. He was sorry to see that an effort had been made to affect the first conclusion arrived at in Belgium, but the latest report on the subject was from the French Commission, in which it was stated that they (the Belgians) had come to the same conclusion as themselves. On the whole he considered that the question, really and impartially looked at, will be considered settled. The only deviation from the first report of 1850 was as to subordinate methods of distribution, whether by the method of moveable channels (which he thought still applicable in a number of cases), or whether by the method of infiltration, carrying them through raised canals, or whether by the old Edinburgh water method, which might now be

considered to be abandoned. There was but one conclusion, and that an independent one, of the competent science of Europe, which was in the direction of the report of thirty years ago, and which was now advocated by Mr. Hope.

Dr. Fergus (Glasgow) said that water carriage had been adopted in many large towns, and he had been told that London had spent thirty millions in attempting to carry it out. Yet the last edition of Dr. Murchison's work told them that a marked increase in fever had occurred there contemporaneous with the completion of the main drainage scheme. They had been told of no end of methods for cleaning sewage at the outfall, but the whole mischief in a sanitary point of view was done before the sewage reached the outfall, and all these proposals were therefore perfectly useless. He had come to look upon sewers as laboratories for the manufacture of sewer gas. Mr. Holland had stated that the Registrar-General's Returns were valueless for the purpose of comparison, but he contended that if the facts were as stated by that gentleman, it made his case much stronger; but Dr. Simon, in his report to the Privy Council, says that diarrhœal diseases are increasing in England. He could quite agree with Dr. McAdam about the inflammable nature of the gas. It had been contended at one time that we had nothing to do but throw our sewage into the streams, and that the putrescent substances would there soon be oxidised, and would not affect the purity of the waters; but we now found that no river could carry off the quantity of sewage that was thus thrown into it. One gentleman had said that with an abundant supply of water we should have no sewer gas, but in Glasgow there was a very abundant supply, no less than 50 gallons per head per day for domestic use, and yet there was a great deal of sewer gas. He doubted whether it would be possible to prevent the sewer gases escaping through the pipes and traps, which became corroded by use.

Mr. Baldwin Latham, C.E. (London), felt sure that Dr. Fergus could not seriously maintain that the adoption of the water-closet system had led to an increase in disease and death, for the reports of the medical officers of the Privy Council, who had made inquiry into the matter, went to show that in all towns in which they had made inquiry the diseases which were due to excremental pollution had decreased wherever the water-closet system had been introduced. It was quite true that many evils had arisen from want of acquaintance with the means to be adopted, but that was no fault of the system itself. There were many towns in which there was no ventilation, either in the sewers or the houses. He knew a case, on the other hand, where the death-rate decreased 50 per cent. since the introduction of the water-closet system; and having quoted instances in Germany where its introduction had been attended with the most happy results, he urged that if it could be successfully applied there, it could surely be applied as effectually in this country. Mr. Smith could hardly expect his figures to be taken for granted as to the land required to carry out the irrigation scheme for Glasgow. He had works in operation where the sewerage of a town, with 1,200 to the acre, was satisfied, and he did not think any difficulty would be found in Glasgow. He was sure that if gentle-

men would only take the trouble to compare the statistics, they would find that wherever the water-closet system has been introduced, an improvement has immediately taken place in the health of the town, and that where the system is not carried out, the death-rate is more than the birth-rate.

The PRESIDENT of the Department said there was no subject more pressingly important for Glasgow than that of the pollution of rivers, and one the discussion of which would prove of greater benefit. He thought that the House of Commons would be obliged to do what the ancient Egyptians did, he did not know how many years ago. The Egyptians had, as all were aware, above thirty commandments, instead of the ten commandments brought down by Moses from the Mount, and one of these thirty commandments was a most excellent one, and one which he should not be sorry to see added to the Decalogue as an eleventh commandment, viz., 'Thou shalt not pollute rivers.' It was his opinion that the House of Commons would be obliged next session to interfere, because it was perfectly wonderful, when manufacturers and Town Councils were told 'Thou shalt or thou shalt not' do certain things, how quickly they found out methods to obey the law. Take, for instance, a case that happened in Glasgow. All who were past middle age in Glasgow would remember what volumes of muriatic acid were poured out from the chimneys of Messrs. Tennants' works, and what injury it did to the whole population round about. Now, the House of Commons said to the soda manufacturers, 'Thou shalt not pollute air,' and the soda manufacturers did not pollute air, and the gas which they treated with such indifference and threw into the air, to the injury of every person, is now carefully preserved by them, and is sold at a great price. They are very much obliged to us for having said so, and no soda manufacturer would like to go back to his old system. So would it be when it was said to manufacturers and Town Councils, 'You shall not pollute rivers which flow past you, in order to wash and fertilise the country, and not for the purpose of being converted into nuisances.' He was prepared to show that there were plans whereby every manufacturer in this country could refrain from polluting rivers and reap a profit thereby, and these plans would be adopted by all manufacturers if they were obliged to adopt them. The time had come when the Government should say that the rivers of our country shall not be polluted, but shall answer the purposes for which they were intended by nature, namely, to flow as health-giving streams through the land, instead of as mere ditches. The period had come when that could be done as practical legislation, as General Scott had mentioned during the day's sitting. But he (the chairman) went farther a good deal. No doubt, by means of the precipitation of solid matters, a great purification would be effected, but he did not think that would be sufficient.

EMPLOYMENT OF MOTHERS IN MANUFACTURES.

What Influence has the Employment of Mothers in Manufactures on Infant Mortality; and ought any, and what, Restrictions to be placed on such Employment?[1] By WHATELY COOKE TAYLOR, Inspector of Factories.

IT was my privilege to read a paper last year before this Association on the general question of the employment of married women in manufactures. The arguments then advanced were confessedly and explicitly derived solely from the point of view of the women themselves, and the conclusions I arrived at were adverse to any further legislative interference with them. I have now been invited to consider the matter from another standpoint, namely, from the point of view of the offspring of such women and the national interest in them; and the terms of the question for discussion are: What influence has this species of employment on infant mortality? Together with another very extensive one: Ought any, and what, restrictions to be placed upon it?

There are several aspects from which such a question may be discussed. It may be discussed in its medical aspect, in its statistical or economic aspect, and in its social and political aspect. That aspect of it which I propose principally to consider is the last of these, and I shall touch but lightly on the first, not only because I am not myself practically acquainted with that branch of the subject, nor even further because it is one aspect which is sufficiently sure in this Section to obtain a full share of recognition, but also because I do not regard the question as in any general sense a medical one at all. For be it observed that it is not positive results, medical or statistical, that are of practical importance in this enquiry, but comparative results. The mere medical investigation of what influence the employment of women in factories has on the rearing of their offspring might be in itself an interesting medical study, as also might be the investigation of what influence the reading of pernicious novels by more fashionable ladies has on theirs, or the smoking of tobacco by almost all manner of fathers; but, unless we were equally ready to discuss the desirability of imposing restrictive laws on novels and tobacco, they could not rank with that upon which we are now to enter. So also the statistics of children who die under the age of one year in different places, and the causes of their

[1] See *Transactions*, 1873, p. 605.

deaths, are useful to us *only* to compare together, and not for themselves alone, still less as a means of furnishing out harrowing details to disturb and terrify the dyspeptic and work upon the sympathies of the unwary. By their means we may, or may not, be able to show a higher rate of infant mortality prevailing in factory-towns than elsewhere; but I would fain believe that should even the worst fall out, and the former result ensue, that there yet will not be wanting some reasonable persons to remember that humanity is not composed exclusively of infants, and that there may be experiences of life even more hateful, hapless, and deplorable than that of being early snatched away from a miserable doom. The practical points to be decided are: Is the infant mortality of these districts a normal one? or is it an abnormal one? or, finally, of so abnormal a character as to call for exceptional legislation? Should the answer be in the affirmative, a further question remains: Of what nature should such legislation be?

So much, then, being premised of the scope of this enquiry, I shall in treatment precisely invert the order in which it comes before us to-day, and assuming—what is commonly believed—that infant mortality in factory districts is in excess, first discuss the several remedies that have been suggested in reduction of it, and the feasibility and desirability of any such remedies being applied. I shall next enquire into the grounds of the belief that there is such an excessive infant mortality at all. By these means I hope the most easily and most briefly to cover the whole field of the controversy.

Let us suppose, then, in the first instance, that such an excess has been proved to exist, and that as Domestic Legislation is the new political watchword, we declare at once for a highly domestic statute, to be called, let us say, a Maternity Regulation Act, and proceed to put it in force. Now, the first thing to be decided is, what is a factory, and what are manufactures? Happily on these points we need now have no doubt, for the terms have been re-defined so lately as this year. The 'Factory (Health of Women, &c.) Bill'—so called, it would appear, because the word 'health' occurs *once* in it, in the preamble, and the thing health is almost the only thing within the whole range of social interests which is consistently ignored—defines a factory to be a building devoted to the manufacture of textile fabrics by machinery, as in the older Factory Acts. A factory district, then, is a textile factory district; and manufacture is the manufacture by machinery of textile fabrics only. Now, this is very important to be borne in mind. There are of married women employed in the textile

factories of this country about 150,000, striking a liberal balance between the rival statements of Mr. Mundella, and the 'Associated Employers' in reply; and of all married women who work for their livelihood[1] about 1,500,000, according to the best estimate that I can make. To what, then, does the proposal to place further restrictions on the employment of manufacturing mothers amount? The proposal is, that this fraction of the married female working population is to be singled out from amongst the rest to be visited with exceptional disqualifications, and to be made the subjects of an entirely new code of laws, and a wholly unprecedented system of legislation. But this married female working population is itself only a fraction, though a startlingly large one, of the whole female married population. The full number of married women in England and Wales is computed at 3,948,527, so that it is not only out of 1,500,000, but out of 3,948,527, that 150,000 of the most useful and industrious women are chosen to be subjected to legal pains and penalties, in addition to those already sufficiently severe ones, natural and social, which it is their hard lot to undergo. I say again that this is most important to be borne in mind, that the issue before this meeting to-day may not be confused, and the argument diverted from its proper course. To no good purpose shall anyone in this discussion stand up to lecture us on 'the proper sphere of woman,' or on the general principles of nursing, for these are not the matters in debate. Those mysterious 'spherical' pursuits of which we hear so much, and these important family details, relate as much to the three or four millions of married women with whom we are nowise concerned as to the 150,000 with whom we are; and, until some one is prepared to translate this modern 'music of the spheres' into dry matter-of-fact, and place everyone in their appropriate positions, they should not interest us. The manufacturing mothers we are to suppose are organised like other mothers, in the first instance; but we have to enquire whether in their particular case a particular kind of occupation does, or does not, oppose certain obstacles to the due fulfilment of their maternal duties, and into the suggestions that have been made for removing any such. We are to say if these suggestions are feasible, and desirable, if they could be realised in practice.

The accusations and suggested remedies themselves are

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[1] The returns of the Census of 1871 give no information on this head. In 1861 there were 1,326,431 married women classed as employed in duties 'other than domestic.'

principally as follows: Factory mothers—their accusers say—do not commonly nurse their own children, but give them out to incompetent and improper persons; or, if they endeavour to do so, must do it intermittently and imperfectly, owing to the inexorable demands made upon their time at the factory. They continue to work too near the period of confinement, and return to work too soon after; and the quality of duties which they are called upon to perform is prejudicial to the health of the child before it is born, and to the health of the mother afterwards. Accordingly, against these suggested evils they have devised some cunning remedies. For instance, it is necessary, I believe, for a mother who would nurse her child successfully to be with it once every two or three hours; therefore, let her work ten hours a day at a mill instead of ten and a half, and the thing is done! This was the argument of some of the principal promoters of the recent Factory Act. Or let her work only six and a half hours, which was the equally simple suggestion of others. Again, she continues her work too near to the period of confinement; therefore, forbid her the mill for a certain time pervious to the event. She returns to work too soon again; therefore, compel her absence for a certain time after.

Now, whatever improvement these two latter suggestions are on the two former—and they have at all events the advantage of not being absolutely ridiculous—I have searched in vain among the spoken and written utterances of their advocates for any description, or sketch, or shadow of a description of the means by which the first of them is to be put in practice. I need scarcely point out in detail in this Section the insuperable difficulties in its way. How is anyone to tell when the period alluded to is near enough for dismissal from work? What is to be the test, and who is to be commissioned to apply it? It has been proposed by some that this should be done by a 'duly qualified medical practitioner.' Let it be so then, and I ask with confidence, can you conceive any more odious and indecent inquisition? I ask you again, how you would like such an one to be forcibly extended to your own domestic circle? If you can conceive yourselves tamely submitting to it, or if you would not very heartily kick 'the duly qualified practitioner' down stairs who came to you unasked on such an errand? Have not, then, factory operatives some natural feelings too? But if not this mode of testing the matter, there is another, if possible, more odious still; namely, that the judgment should rest with the manager, overlooker, or owner of the factory. It is scarcely possible that anyone could really have intended to legalise so gross an outrage as this; but

in the absence of any positive statement of what they do mean we must take the possibility into account. Can you realise in imagination a more shameful proposal? Imagine the abuses of which such a power would be capable! Think, too, of all the devices that in either case might, and would, be adopted to conceal the true position of affairs, and the moral and physical degradation that would surely follow. I forbear to enter further upon these details; in the plain clear light of common sense and common decency such a proposal stands condemned.

The project of forbidding women to be employed in mills for a certain period after their confinement has been more fortunate than the project for excluding them previous to it, in having met with some intelligible expounders. Upon going into committee on the recent Factory Bill a small batch of legislators were discovered to have amendments on the notice-paper appropriate to the occasion and to this end. Dr. Lush, to whom I accord the first place, not only in right of his probable professional knowledge of the subject, but also as being most moderate in counsel, advocated a period of exclusion of six weeks, and that the mother should be fined if she returned to work within that time. Mr. Tennant, Member for Leeds, suggested six months instead—afterwards altered, however, into the mystic six weeks also—and sought to shift the responsibility on to the owner of the factory; while Mr. Assheton heroically came forward with a proposition for twelve months 'right off,' thereby, no doubt, considering that he had, circuitously perhaps, but surely secured indefinite expulsion. Lastly, Messrs. Bridges and Holmes, the authors of a report to the Local Government Board on this and kindred matters, had already put their suggestion before the public, to the effect that a certain Black List, so to speak, of women who had been guilty of child-birth within a definite period should be kept and circulated by the various local magistrates to the manufacturers of the district, who would thus become responsible for avoiding to take into their employment any of such women. A Liverpool justice of the peace, bearing an honoured name, not long since adopted a somewhat similar expedient, with a view to checking drunkenness, and a Drunkards' List was regularly published in the local papers. Let us proceed at this rate for some time, and to what sort of 'Lists' shall we ultimately come? The thought is terrifying and suggestive. I do not object to a woman remaining at home with her infant, if her infant requires her, nor to her performing all necessary offices about it, however and whenever she thinks best and Nature herself dictates —nor, I suppose, does anyone—but I do very decidedly and

circumstantially object to her most intimate domestic family affairs being made a matter of public concern and penal enactment. I raise my voice against this tyrannical interference with the freedom of private life, however humble, this intolerable Government meddling with individual liberty, personal dignity, and social propriety.

There is a certain school of persons who seem to believe that because a given end is in itself desirable it is no matter by what means, howsoever cruel and unjust, that it be attained. There cannot be a more shocking doctrine. If the method of suppressing an evil be more objectionable than the evil itself, neither statesmanship nor reason requires us to move against it. It is the balance of good which in all matters of practical polity is the statesman's concern, nor will unjust means ever lead us to a righteous end. A right rev. prelate has nobly said that he would rather sacrifice sobriety than liberty in this country; I desire to place it upon record here that I would far rather see even a higher rate of infant mortality prevailing than has ever yet been proved against the factory districts, or elsewhere, than increase one jot the already heavy burdens of maternity, or intrude one iota farther on the sanctity of the domestic hearth and the decent seclusion of private life.

It is, moreover, but an ill omen of either the integrity or unselfishness of those who advocate this change that all their efforts should be directed against the mother directly, and only in favour of the child indirectly, if at all. For, oddly enough, we do not find that these reformers, who are professedly so careful of infant life, are prepared with any proposals on their own side for its support. On the contrary, they seem to have carefully provided *against* this. The child is to be given over to the mother to nourish, whether she will or no; but who is to nourish her? The reformers will not—they have not even given the matter a thought; the State will not; on the contrary, it will forbid her to nourish herself; her husband will not—there is no effective law to compel him; therefore why should he? But if no one must feed the mother, and she may not feed herself, then surely she will die, and her child along with her, which seems an odd way of preserving infants. How, again, about deserted wives and unmarried mothers—too painfully common social phenomena—what provision has been made for them? In their blind zeal to shut women out of the labour market on this poor pretence, have our philanthropists quite forgotten what it was that they were to preserve? Or is it that the whole scheme is so feeble and immature in its conception that they have never taken these common possibilities into

account? Might it not rather seem that a simpler and more certain way of checking infant mortality would be to make some provision for infants not otherwise provided for, to offer some support to their mothers instead of depriving them of all and to encourage them to look on maternity as a high and proud privilege, instead of a disqualification and offence?

Again, what pretension can be more unreasonable and insolent than that of laying down a hard-and-fast line as to what quality and amount of exertion will be suitable to all sorts of women before and after childbirth? It is asserted that the effort of factory work is prejudicial to the infant ere it is born, and to the mother afterwards; but is it anything like so commonly prejudicial as the absence of all effort, which so notoriously and injuriously affects women of a higher grade at such a time? No one with any extensive knowledge of the facts would surely say so. Drive, then, first these lazy and luxurious mothers into exercise for the benefit of their unborn children, and you may afterwards with a nearer approach to justice drive others from the practice of honest industry for the benefit of theirs. Moreover, there is much vague and ill-considered talk about the hard work that goes on in factories by those who have probably never seen the inside of one in their lives. Much of the labour in factories nowadays consists solely of watching the action of self-acting machinery, and of occasionally setting anything right that may happen to go wrong with it. A large portion of it is performed by women sitting down, many of whom may be seen reading books, sewing, or knitting, until the machinery itself gives notice that something calling for their intervention has happened. The joining of a thread or removing of a bobbin is probably then the highest exertion needed, and they resume their seats. Even weaving, which is usually the particular occupation cited, is by no means such hard work as every female servant in a household is constantly called upon to perform, and nothing like so injurious to pregnant women as the occupation of stitching, at which so many unhappy sempstresses waste away their lives. Shall I go on and instance the labour of the fields, and horrify you with the stories that are told of the agricultural districts? Not so; it is enough to ask why domestic servants, and needlewomen, and women employed in all other sorts of workshops and elsewhere are to be permitted to proceed on their own way unheeded, while the far more carefully supervised factory hands are to be legislated against?

But I am reminded, perhaps, that it is because this latter class is the most sinning in the matter of infant mortality, and

it is true that we have assumed this. Be it so then; let not further temptation be placed in their way. It is said that they have an interest now in getting rid of their children; how much more will that interest be increased when you take away from them all means of earning their livelihood, or greatly curtail their opportunities? It is not true either that they have this interest, but rather they are almost the only class of the working population who, speaking economically, have *not*. It is legal to employ a child of eight years old in a factory, so that even at that tender age they can earn money for their parents. In how many other occupations is this the case? It would surprise some here too to learn how much money these little ones sometimes do earn, and how comfortably a family in the factory districts may live where all its members have employment. By all means let every precaution be taken against the horrible crime of infanticide! I am all for that; and I will tell you further how to set about it in the right way. Establish day nurseries, under proper supervision; abolish burial clubs—they were better named Death Insurance Companies—above all, teach the simple elements of physiology and hygiene to the working classes. There are some good ladies—all honour to them—who have already set earnestly about such work, and I hope their voices will not be absent from the discussion to-day. Above all, I would name one—Mrs. Buckton, of Leeds—whose humane and skilful efforts in this direction deserve a far higher tribute of admiration than it is in my poor power to pay. Would that many more would emulate her noble and unpretending example. Might not factory-women also establish benefit clubs among themselves, to help each other when in this predicament? And might it not be customary also for men to contribute on their marriage towards these? I do not advocate high rates of infant mortality, or things being left as they are, when possibly they might be improved; I advocate all the reverse of this. Let every effort compatible with freedom and decency be made to bring the rates down, but let the aim be throughout to preserve the children, not to destroy the women. And let it be seen that the efforts are compatible with decency and freedom. With what patience can we hear it stated that working mothers should be compelled to stay at home and nurse their children, when we know that idle mothers are not compelled to stay at home and nurse theirs? With what degree of calmness talk of compulsory surgical examinations being forced upon honest and well-conducted wives because these women labour for their own livelihoods! Let me speak plainly in this matter. We have hitherto prided

ourselves in this country—and prided ourselves justly—on the liberty of the subject, on the sanctity of the domestic hearth, and on the decency and privacy of our family life. That unit, the Family, is the unit upon which a constitutional Government has been raised which is the admiration and envy of mankind. Hitherto, whatsoever else the laws have touched, they have not dared to invade this sacred precinct; and the husband and wife, however poor, returning home from whatsoever occupations or harassing engagements, have *there* found *their* dominion, *their* repose, *their* compensation for many a care. There has been a sanctity about this English home-life which even the vilest have acknowledged and the rashest have respected. But let such legislation as is now proposed be adopted, let the State step in between the mother and her child, and let us for ever abdicate this pretension—let us be prepared to remodel all that. Domestic confidence is destroyed, family privacy invaded, and maternal responsibility assailed. For the tender care of the mother is substituted the tender mercies of the State; for the security of natural affection, the securities of an unnatural law! Better by far that many another infant should perish in its innocence and unconsciousness than live to be the victim of such a state of things.

I say, then, that though it were proved ever so clearly and completely that infant mortality was higher in factory districts than elsewhere, and this by reason of the employment of mothers in mills, that sound policy and respect for the decencies of life would still peremptorily forbid any legislative interference with them. I say that the attempt to check such an evil would lead to consequences worse than itself; that no reasonable and effectual scheme for checking it has ever yet been propounded; and I deny that any, of the kind suggested, ever can.

My answer to the latter part of to-day's question is thus an emphatic No; but whilst I am bound to record such a conclusion unequivocally, and do so, I do not doubt but that much might be done, not only in factory districts, but elsewhere, in reduction of the mortality amongst infants, without interfering at all with the lawful liberty of mothers. My principal suggestions on this head I have already given, but I will here briefly recount them. They are:—

1. The more general teaching of the elements of physiology and hygiene. I think no girls' school should be permitted to receive scholars in which these are not an essential branch of education; even to the very youngest girls such knowledge is important, for infants are constantly left in their care and suffer by their ignorance.

2. The more general establishment of *crèches*, or day nurseries. It would be a very happy result of this day's discussion if a committee were appointed to inspect and report upon those which, I am told, already exist in this city.

3. The suppression of burial clubs, a system by which a premium is paid on the death of every child.

4. The enactment of some effectual law by which a wife may be able to compel her husband to support herself and their common offspring, when he refuses or omits to do so.

These simple remedies would do more to lower the assumed high rate of infant mortality in factory districts than any interference with the employment of women, however universal and unsparing.

But what if, beyond and besides all this that I have shown, there was no proof of an excessive infant mortality in factory towns at all? What if, not only had this been never proved, but that this could not be proved? That not only this could not be proved, but that absolutely this had never been? What would you say then of the persons who had diligently striven (however ignorantly) to lead your sympathies astray in this solemn matter; who had fabricated (wittingly or not) a vile disease to apply to it an odious cure? Would you not scout them as leaders and counsellors in future, and rejoice that, misled by eager enthusiasm, you had not consummated a grievous wrong, and inflicted a shameful injury upon your sisters and upon society at large? Yet every one of these charges that I here insinuate I shall here substantiate. I shall show you now, in the close of this paper, that the factory districts do not show an excess of infant mortality, as has been assumed; that therefore the employment of mothers cannot be, and is not, the cause of such an excess wherever it does exist; that this last new social difficulty is but 'the baseless fabric of a vision,' and all these unwholesome and unwelcome artifices by which it was to be met utterly unnecessary and absurd.

Let us commence with the report of Messrs. Bridges and Holmes, two gentlemen who are, in a measure, responsible for much of the loose and fatuous talk that has taken place on this subject since its appearance. 'Very strong statements have been made,' say they, 'both by the opponents and supporters of the present factory system, as to the degeneracy or the vigour of the operative population. . . . but to the question, will the children employed in a cotton-mill or a worsted-mill compare favourably or the reverse with children of the same age, race, and district not so employed. . . . we should have found it hard to return any but a conjectural answer.' This was after em-

ploying several months in visiting the textile districts for the purpose specified, and shows, in the first place, that no very striking deformities met them on the surface. Accordingly, they instituted instead 'a careful and systematic examination of children on an extensive scale'—the detailed results of which are to be found in a considerable Blue Book which is published. The summary is all that we have time for. Here it is: 'In all about 10,000 children were examined.... The general impression made by the factory children upon the inspectors was in many respects not unfavourable.... As compared with the children of the East of London, or of the poorer parts of Liverpool, they were markedly superior. They did not appear to be more liable than ordinary country children to rickets or scrofula. Their general health in most other respects seemed fairly good.' But, we hasten to reverse the picture—they had not as good teeth or as high insteps as some other children, and the heads of many of them were infested by vermin! Now, this is absolutely the sum of what they say of the results of this examination.[1] On the strength of such results they report: 'It does not appear to us impracticable, and if practicable, it certainly appears desirable, to make some arrangements by which mothers of young infants shall either be employed half-time or be excluded for a time from the factories altogether.' Their practicable proposal we have dealt with elsewhere; but was there ever so extraordinary a

[1] As Lord Rosebery seemed to doubt, in the discussion that followed the reading of this paper at Glasgow, that I had here quite fairly represented what Messrs. Bridges and Holmes have said on this subject, I append the passage in full. Neither those gentlemen nor myself can have any possible interest in the different views which we hold and advocate on this question than that of serving, to the best of our abilities, the common cause of our country and of humanity. The passage from their report referred to is as follows (page 46):—'The general impression made by the factory children upon the inspectors was in many respects not unfavourable. As compared with the children of the East of London, or of the poorer parts of Liverpool, they were markedly superior. They did not appear to be more liable than ordinary country children to rickets or scrofula. Their general health in most other respects seemed fairly good. Attention was, however, drawn from the first to the frequency of diseased dentition, and of the flattening or depression of the arch of the foot. Further, the attention of some of the observers was called to the almost uniformly dirty condition of the children's heads; and, although a similar condition was observed in many of the schools in non-factory districts, still there the examples of cleanliness were far more numerous than in factory schools. In the schools of Bradford and Keighley very few out of the many hundreds examined had heads free from vermin; and a similar condition is reported from Bolton, Bury, Heywood, and Rochdale, and the surrounding neighbourhoods. The fact that in many schools of non-factory districts a similar state of things was found shows that a reduction of working hours, giving more time to women for domestic duties, would not of itself remedy such an evil. We cannot but think, however, that it might contribute towards the cure.' Of the considerable body of medical testimony included in the report I have said nothing, for the reasons stated in the paper itself.

conclusion? Because it was noted of the factory children who were examined that their general health was good, that they were not more liable to rickets or scrofula than other children, that they were 'markedly superior' to those of the largest non-manufacturing towns, therefore exceptional precautions were needed for them! To no purpose do the Commissioners mildly describe this unexpected verdict as 'not unfavourable;' it is made most evident how favourable it must be held by the course to which they are reduced in calling it in question. When two such men, eminently distinguished for integrity and ability, and placed in a position of so much responsibility, can seriously write of bad teeth and dirty heads and flat feet as sufficient cause for introducing sweeping legislative changes, it is but too evident on which side their bias inclines, and how much pre-occupied they must have been by a foregone conclusion. But were it not so even yet, the reader has but to continue the paragraph to resolve all doubt. Even the powerful plea of the dirty heads redounds presently to their own confusion. After commenting sadly upon it, they add, however: 'The fact that in many of the schools of our factory districts a similar state of things was found, shows that a reduction of working hours, giving more time to women for domestic duties, would *not* of itself remedy such an evil.' Good! One might have thought that they had thus completely disposed of their own theory, but not so; they proceed: 'We cannot but think, however'—mark the forcible conclusion—'that it might contribute towards the cure'! *Might—contribute—towards!* Are the Commissioners jesting with us? Why, so also 'might,' or rather far more certainly would, the application of a little warm water and soap 'contribute,' or even of a closely-toothed comb; so also 'might' the dirty teeth be hopefully submitted to a course of Rowland's odonto; and the feet be happily encased in shoe-leather 'towards' the same good end. But really the notion that the liberty of the working-women of England is to be wrested from them because some amiable but hypercritical gentlemen find certain urchins not possessed of as good teeth, clean heads, and symmetrical feet as they could wish, almost exceeds belief.

The Commissioners are not more fortunate in their statistics. It is generally said that by means of figures one can prove anything, but these gentlemen have achieved the singular distinction of having proved by means of figures absolutely nothing. Nay, so far as their cause is concerned they have proved worse than nothing, for they have by a strange system of procedure evaded the real issue all through. This system

is none other than that of publishing a long list of factory towns, with their infant death-rates, whilst not a solitary non-factory town is quoted to compare with them! How anything at all is to be proved by this process it is not easy to see. Nay, they have themselves apparently given it up as hopeless when it comes to really making the attempt, for, after a preamble about the 'information supplied by the Registrar-General,' they exhibit a list of thirteen factory-towns entirely of their own selection (and in no recognised order), with their infant death-rates, only to say: 'The first remark to be made on these figures is, that the high death-rate which they show is of course *not* to be attributed exclusively to, even if it were to be attributed mainly to, the occupations of the people!' What more need be said about it at all, then, if in their own selected instances this is the very 'first remark' which they have to make? But is it conceivable, after this complete abandonment of their position, that two skilful and honourable gentlemen should be found to urge forward the propositions which they do; and is it not melancholy that many well-intentioned persons should blindly second their dangerous endeavours?

Did I boast idly, then, when I promised to show you that this assertion, which has been so often and so confidently made, has never yet been proved, and is even at the present moment, when we are being called to act upon it, the merest hearsay? But I also promised further to show something on my own part—something very startling indeed—no less than this, that that assertion, which never has been proved, never could be proved, simply because it is false, and the opposite of it is true. I too have been in communication with the Registrar-General. I too am indebted to his courtesy for information bearing on this subject, and I shall transfer intact to these pages that which I have received. In answer to my enquiry as to what town had the highest infant mortality, I have been furnished with a printed table, No. 4 in his regular report, containing this and some other interesting information made out for 'eighteen of the largest English towns, in fifty-three weeks, ending January 3, 1874.' These towns are:—

London.	Leicester.	Bradford.
Portsmouth.	Nottingham.	Leeds.
Norwich.	Liverpool.	Sheffield.
Bristol.	Manchester.	Hull.
Wolverhampton.	Salford.	Sunderland.
Birmingham.	Oldham.	Newcastle-on-Tyne.

Now, which of these do you suppose can show the highest rate of infant mortality? Is it Manchester, or Salford, or

Leeds, or Oldham? Not one of these! The town which heads the list is not exclusively a factory-town; it is principally an agricultural and workshop town, the centre of an agricultural district; it is Leicester! But, further, taking the next three towns in the order of their demerit, they are Bradford, Sunderland, and Liverpool. Now, Bradford is not exclusively a factory-town either in the sense in which the recent Factory Act defines them; there are many textile works in it, but also an almost infinite variety of others, and it is by no means a factory-town in the same sense as Oldham, Ashton, Staleybridge, and such as these. In Sunderland, the third upon the list, there is not a single factory at all; and in Liverpool, as I know of my own personal knowledge, there is but one! What have the asserters of excessive infant mortality induced by manufacturing mothers to say to this? Not one factory in Sunderland; and but one small mill in Liverpool! Again, taking the first ten of these towns, there are actually only three factory-towns amongst them, namely, Bradford, Leeds, and Salford, of which the first and second, but especially the second, are scarcely factory-towns; and Salford, which is, comes the very last. Taking the whole eighteen, they only include altogether six factory-towns, or but one-third of the whole; and if we were to exclude Leeds and Bradford, but these four, Manchester, Salford, Oldham, and Nottingham, of which the last mentioned is only partially a factory-town. Their full order and percentage is:—

Leicester	38·0	Salford	27·2
Bradford	33·4	Nottingham	26·7
Sunderland	31·8	Oldham	26·7
Liverpool	30·5	Newcastle	25·9
Sheffield	29·7	Portsmouth	25·9
Birmingham	29·1	Manchester	25·6
Leeds	29·0	London	25·1
Hull	28·9	Bristol	24·9
Wolverhampton	27·6	Norwich	24·3

I might well rest my case and end my paper here, and I hasten to its close. I am unwilling, however, to leave a single peg for an opponent to hang an argument upon. I am anxious to dispose of this long-vexed question once and for all. Many facts, too, I have accumulated in the course of my researches so full of interest in themselves, and so pertinent to the subject under review, that I would fain communicate them to this meeting, even at the risk of being tedious. Thus, I find that taking at random two such essentially manufacturing towns as Huddersfield and Halifax, and comparing them with two of our most popular seaside health-resorts, Brighton and Scar-

borough, that the rate of infant mortality is both respectively and collectively higher in the latter. I find that York numbers a higher rate than Wakefield, or Todmorden, or Pateley Bridge, factory-towns in the same county; that Penzance, right at the other extremity of England, is far in advance of Rochdale, or Bury, or Macclesfield, or Bolton, great manufacturing centres in Lancashire and Cheshire; that historic Canterbury is a long way ahead of Chorley or Clitheroe, which follow swift upon it in any alphabetical list of names, and that the typical fishing-town of Yarmouth numbers a very much higher rate than Barnsley, Bewdley, Blackburn, and a host of other factory-towns which I have and have not mentioned. I was particularly anxious to get some reliable statistics from a purely mineral district, and I have been happy in obtaining these from Barrow. In this remarkable town, and in the neighbourhood, the wages of the operatives have been for some time back almost incredibly high, owing to the enormous expansion of trade and the unprecedentedly rich veins of the finest iron-ore which abound in the vicinity. There is but one factory in the town, and the female population accordingly is almost altogether unemployed. Yet in this singularly favoured locality, as some persons might suppose it to be, the infant mortality far exceeds anything that I have yet quoted, throwing even Leicester completely into the shade. Dr. Allison, the medical officer of health there, has furnished me with the following figures:—From January to August of this year, inclusive, the total number of deaths was 682; and of these 275, or forty per cent., were deaths under one year of age. He begs me, however, not to include the last two months, as they were exceptionally heavy; so, taking the first six only as a perfectly fair average, we get out of a total of 465 deaths 172 under one year, or just thirty-seven per cent.!

Now, what, I ask, is the infallible conclusion from all these facts? We have taken all sorts of places for the purpose of comparison. We have taken the typical seaside resorts; we have taken a typical fishing-town and a typical mineral-town; and, comparing these with factory-towns, we have discovered that the infant mortality in the latter was in every instance not greater, but less. The conclusion infallibly must be that the employment of mothers in manufacture does not influence unfavourably the rate of infant mortality. Nor are we without even more direct testimony to the same end. Struck with the extraordinary circumstance of the bad pre-eminence of Leicester, I wrote recently to the medical officer of health there, Dr. Crane, on the subject, and received from him a most

courteous and valuable reply, together with his yearly report. In the former he professes himself unable to account for the circumstance of the abnormal rate; in the latter we have a curiously pertinent piece of history. Last year the town was visited by a most severe epidemic of diarrhœa, and Dr. Crane was unremitting in his endeavours to trace it to its cause. Inspectors were appointed under his direction to follow up every clue, and the full particulars of 283 houses where deaths under one year occurred were collected, and are given. Of these 283 infants who died from diarrhœa, 82 were the children of women who went out to work, and 201 *were the children of women who did not!* How will my opponents get over this? But one more instance, and I have done—that of London. London is a non-manufacturing town, and has also a singularly low rate of mortality, infant or otherwise. It is, therefore, an instance not immediately pertinent, but not the less valuable in the way of contrast. Where in London is the infant mortality highest? Is it in those parts where the women do often undertake industrial work of some kind—namely, in the North and East? Not so; it is in the West End. Westminster has the highest rate of infant mortality, and Mile End, Poplar, Hackney, and the City the very lowest.

These, then, are my facts, presented to you precisely as I obtained them, and merely marshalled as they came first to hand; and I trust that, with such before it, this meeting will not give its sanction to any unjust, unnecessary, and insidious scheme for placing further obstacles in the way of the industrial employment of women.

Mr. William Hope, V.C., read a paper on the subject. He said that the physical conditions of infant life must have an even greater effect on infant mortality than the employments of mothers, and that in considering what was the greatest cause of infant mortality, they should be guided towards a correct solution of the question by finding what was the greatest cause of health and vigour, and what of sickness and feebleness in young children. One great cause of health and vigour among children was an abundant supply of pure milk, while its absence, and the substitution of flours and patent foods, was the principal cause of sickness. The diminution in the size and strength of our town population might be taken as a fact, but they might say, what had that to do with milk and infant mortality? Why, he said, milk was the one great source from which the bone of young children was made. It was a complete food, and contained soluble phosphate of lime in a form more easily digestible

than that in which it was found in any other substance, and human bones contained more than 50 per cent. of phosphate of lime. He claimed to have proved in his paper that purifying our rivers, and giving pure water to drink, would, by the necessary and consequent utilisation of sewage, give the towns plenty of pure milk, and that plenty of pure milk would rear strong, vigorous children and men. Sewage waste produced deficiency of milk; deficiency of milk produced feeble children; feeble children developed into feeble and drunken men and women; and the children of these again were more feeble still. Of course, bad houses, bad air, and bad company all aggravated the evils; but the root of the whole was want of milk. Take one of these nerveless, boneless creatures he had described and put him in a model house, with good air and good company, he still would take and require his dram, and why? Because he had not got enough milk as a child, and because they could not feed enough cows within reach of big towns unless they resorted to growing Italian rye-grass by means of sewage irrigation. Of that milk-giving, life-preserving plant he was now cutting his eighth crop for this season.

DISCUSSION.

The Earl of ROSEBERY said that he confessed that the view presented by Mr. Cooke Taylor was one so startling in its results, and so different to that arrived at by factory inspectors after calm, impartial, and mature consideration, that he could not help saying a word on some of Mr. Taylor's facts, which seemed to him not to bear the closest scrutiny. He thought that gentleman spoke with some levity of the 'music of the spheres,' as he termed those certain family duties which he did not define. It was obvious to those present that there were certain duties connected with the holy office of maternity which could not be neglected with impunity. If they could, how was it that Messrs. Holmes and Bridges, after a lengthy inquiry, found themselves compelled to arrive at the conclusions they did? How was it that M. Dollfus, of Mulhouse, a French manufacturer, had felt himself impelled to make actual experiment on the matter? That gentleman was so struck with the infant mortality among his factory operatives that he allowed all women to remain at home for six weeks after confinement, and paid their wages. The result was a diminution in infant mortality of 13 per cent., thus proving that there were conditions in factory employment having an influence on the life of children. However, if it were absolutely impossible to devise any remedy that was not open to the animadversions of Mr. Cooke Taylor, it was not too soon for them at any rate to begin to discuss the subject. It was only by discussion in Social Science

meetings like this they could hope to arrive at a solution. As to the remedy proposed by Mr. Taylor, the instruction of mothers in the elements of physiology and health might do some good; but they must remember that, while mothers were learning, children were dying. He had not the report of Messrs. Holmes and Bridges with him, but he confessed at once that he could not recognise in the references to that report by Mr. Taylor one-tenth of the pathetic facts produced in the document itself, and he was surprised that Mr. Cooke Taylor had not noticed the fact that of the children in Manchester one-fourth died before they were a year old. He protested against Messrs. Holmes and Bridges' report being dealt with as it had been, and against the complete discouragement of all attempts to discover a remedy for what all must admit to be a glaring evil.

Dr. Alfred Carpenter (Croydon) said to some extent he agreed with what had fallen from Mr. Cooke Taylor. He did not think that it necessarily followed because women were engaged in the manufactories that this added to the mortality of their infants. If they looked at the statistical facts that had been adduced in various parts of the kingdom they must come to that conclusion, because it was undoubted that in some of the agricultural districts, in some of the small agricultural towns, and in some of the small cities, the mortality amongst infants was as large as it was in the manufacturing districts. He therefore held, from the facts which had been adduced, that it followed that any legislation that might be forthcoming should deal with the subject generally, and not with reference to manufactories alone. Legislation must deal with the subject generally, because there was an enormous mortality taking place in this country amongst children. In many places one-fourth of the children born—in some it was considerably more—died before they reached one year. When they found that under favourable circumstances this death-rate was not more than five per cent. they might well stand appalled. It was not, he thought, in the occupation of the mothers that the mortality arose, so much as in the way the children were fed. Some time ago he made observations in the part of the country from which he came, and he compared the infant mortality among two sets of people, among the children of publicans and the children of clergymen. The inquiry ranged over 80,000 persons and extended over a period of five years, and he found that the mortality among the publicans' children was four times more than among the clergymen's children. Well, these publicans' wives were not engaged in manufacturing employment, they were not prevented by any duties from nursing their children, but the fact was that the mothers had not nourishment enough to give them. He found out that 95 per cent. of those children who died under three months were not provided with natural food, and 75 per cent. of those who died under nine months. Now, as these publicans' wives were occupied chiefly in house duties, there was no reason on the score of work that the mortality should be so high. One would suppose that they would not have so large a mortality as in those cases where the mother was engaged in manufactories; but this was not the case; the children of publicans have the greatest mortality. He now came to the question which had brought him to his feet. There was no doubt that

if they could introduce into their crowded localities an abundant and wholesome supply of milk we should have a great deal lower mortality amongst their people. The people, even the agricultural population, did not get a sufficient supply of milk; the farmers preferred to give it to the pigs rather than to the poor people, and the consequence is that children are deprived of their natural food, and this was a great cause of that high rate of mortality which they all deplored. The people should be provided with plenty of milk, and that could be secured by utilising their refuse, and it could be done.

Mr. P. H. Holland (London) said the facts mentioned in connection with this subject had an important bearing on the corporation statistics which Dr. Fergus had brought before them on the previous day. Want of proper food was shown to be a chief cause of infantile mortality, and, owing to over-population, this deficiency increased in our large towns. Here was a cause at once to account for a higher death-rate; and it was satisfactory if they had done nothing more than stop the increase of this death-rate by the sanitary improvements which they had introduced. If it were true that factory towns were unhealthy, it was because so large a proportion of the people lived unhealthily; and the great majority of the factory towns were unhealthy because they had grown up with unnatural rapidity without proper sanitary improvements. The mortality was very high in Merthyr, not because the mothers were employed in the factories, but because the people themselves were unhealthy, and the children died of want of proper food and good air. Manchester, the statistics of which had been referred to, had only a small proportion of factories, not more than one-tenth of the population being thus employed, and a very small proportion of them being women. The fact was, if these large towns were provided with an abundant supply of pure milk, a good water-closet system, and a plentiful supply of pure water, more good would be accomplished than by any restrictive legislation on the labour of married women. He did not, however, think it wrong to limit the time they should work in the day, for it had been proved that women required more time at home than men, and that, in granting it to them, far from diminishing the work actually performed per day, they would increase it and earn more money per day. The real reason why this concession was not voluntarily made by the masters was that the women could not withdraw without affecting the work of the whole factory, and it was, therefore, necessary to act in the interest of the great majority; but he should be in favour of enforcing it by law.

Professor Gairdner (Glasgow) said that any right he had to offer an opinion on this question was derived from two circumstances: first, that he had had considerable local experience in Glasgow, derived from his official position as Public Health Officer, and, secondly, from his having given a good deal of attention specially to it, having, in fact, submitted a paper to the last Congress held in Glasgow on the very subject. As regarded the statistics of the question, his researches led him to the conclusion that it was extremely difficult to solve the question by reference to them; but he entreated those who might be

carried away by the paper of Mr. Taylor to try and forget that aspect of the question. He belived it was quite impossible, by statistics of one town against another, to arrive at any satisfactory conclusion. The causes of infantile mortality were extremely complicated and almost infinite. Whatever caused a high death-rate, whether it was defective house accommodation, stenches and abominations, lax morality, or any other cause, the same cause acted on the infantile death-rate. Then there were specialties affecting the infant death-rate over and above the general death-rate. There was something, also, in the habits of populations, and especially of women. It might be taken as an axiom that whatever tended to disorganise the home and break up the family life tended to infantile mortality, and that was as near the law of the matter as he could arrive at. If that were so, no one with practical experience could doubt that the employment of women for factories largely increased the death-rate among children, although it might not be the only cause of it. The paper he read at the last meeting of the Congress at Glasgow showed that a very large infantile mortality existed in the West End of London, and this was, no doubt, owing to those fashionable amusements, such as balls, which drew mothers away from their homes frequently three or four times a week. It might very naturally be asked if the very high rate existed amongst the people of high rank themselves? It hardly did. It was not the children of this class who suffered most when they chose to neglect their children; but the mothers at the other end of the social scale were called to the rescue at the cost of their own infants, and he believed if this were not so the infantile mortality of the upper class in the West End of London would be as high as that of mothers employed in factories. It was necessary for them to have all these things in their minds when they came to deal with statistics, or they would be sure to be misled. He had no doubt of the injurious effects of factory labour on women at the time of childbirth, and he felt that, in this case, the facts mentioned by Lord Rosebery went further than any statistics. But it was quite another question how far legislation should go in positive interference. Maternity was one of the most intricate and delicate functions of woman, and he was in favour of legislative interference so far as it would be likely to influence the result which he wished to attain; but he was not in favour of legislation which would suggest that the State took upon itself to control and direct the functions of maternity and the nursing of infants, and he did not think such a course would accomplish much good.

Mr. Ball admitted that the popular view of this question was in the direction advocated by Lord Rosebery. He thought the subject of home life had not been considered in discussing the question. Those who, like himself, had studied the home life of the poor, had arrived at the conclusion that the great cause of infant mortality was the insufficient food of the mothers. He had known instances in which mothers had almost starved themselves in order that their children should not want. The author of the paper had mentioned four points in which we could improve the present condition of things. Amongst them he recommended the teaching of hygiene in our elementary

schools; he did not expect much from it, but it need not be lost sight of. He thought much more would be accomplished by means of day nurseries, and that they should be more generally established in factory districts. He thought the *crèche* a very excellent institution, and mentioned a very good one existing in London. He pointed out that the only difference between the *crèche* and the day nursery was that the latter took the children until a rather greater age. He considered it a very important proposal to compel husbands to set aside a sufficient portion of their earnings for the support of their wives and children; and on the subject of the legislation which the paper of Mr. Cooke Taylor deprecated, he thought the only wise course was to deal with the subject in a more general sense, including all kinds of labour.

Mr. W. J. Cooper (London) advocated a closer examination of the water supplied to towns, and related a case of impure water coincident with a very large infantile mortality.

Miss Todd (Belfast) felt that this was more a question of experience than of theory, and the particular experience of ladies could not be overlooked. Theory was against the legislation, and there was great risk and grievous evil in the interference by the State in domestic relations, and the fact that these relations were in this case complicated by being brought into contact with industrial relations seemed not to diminish the risk and the danger of State interference, but very greatly to increase it. She objected to it because it gave enormous publicity in matters which ought not to be made public; that it interfered with the home life of one particular class, and involved inspections and details which concerned the women alone. They had been told that the present state of things was unfavourable to the moral as well as the physical life, but at least there were channels by which it could be improved, and women in that sense stood in much the same position as men. They never could obtain anything like a true life with such interferences. They would only lead to loss of caste and both their own self-respect and that of their husbands. It was a curious fact that those who knew best the inner life of the women of the factories —the class of educated ladies who gave up a large part of their time to visiting these people at their homes—had never been asked for an opinion upon this question, and when it was offered it was thrown aside as of no moment. These women did not work at the hard, trying work of the factories if they could avoid it—she was speaking of Scotland and Ireland; they did it only when they could not obtain sufficient support from their husbands. In Belfast, out of many hundreds, she had never once met with an instance of a married woman working in a mill or factory whose husband was not a helpless invalid or a hopeless drunkard. Until they could be able to get sufficient support for themselves and children it was unwise to interfere in this kind of legislation.

Mrs. Amelia Lewis (London) differed with some of her friends in her views on this subject, but would not have come forward had she not heard it stated that legislation of this kind could not possibly be permitted in a free country. They had already got the legislation, and they must make the best of it. It had also been said that from this Congress there should

not go forth an opinion that this legislation was right. She held that it was right, after a long experience of the poorer classes. It was a question of social development, and one of the grandest themes that could be discussed, for it involved the question, what were we leaving behind us? It had been said that such legislation was an infringement of liberty, but she answered that it was the liberty to allow children to grow up in disease. It had also been urged that the women ought to speak for themselves upon such a question. They did speak; the workwomen would all be found on her side. It was necessary to come back to natural principles, and to remember that women had to do a work of nature in bearing children, and if men were not made to see this it would be quite useless to cure them of cruelty by flogging them. Legislation had the power of giving an impetus to a feeling which might be gradually setting in a particular direction, and the recognition by the Legislature of these natural duties of women was, she thought, an instance of this. She hoped, however, that time would render this interference unnecessary.

Mr. Wilson said no one could be more alive to the importance of the health of children than he was, for, as a large manufacturer, he found it his interest to have a supply of healthy children about his works. This legislation would bear with greatest severity where the deepest poverty prevailed, through the illness or death of the husband, previous to the wife's confinement. It would be a most disastrous thing if, by crippling the powers of the women to maintain their children, they should compel them to resort to more objectionable means of securing that support. A great many of the mothers in our manufacturing districts were not married mothers. How were they to be supported? He feared also that such legislation would be a bar to marriage. There was one remedy they ought specially to bear in mind, and that was to throw upon the husband the responsibility of this great question, and he rejoiced to know that the working classes did feel that responsibility. If it was taken away from these men, it would do a great deal towards lowering and degrading them. He would like to see it looked upon as a disgrace for married women to work, and if they really believed in the power of education, they need not fear but that this result would be obtained.

Mr. J. H. Raper (Manchester) remembered very well the discussion of this subject twelve years ago, when it was introduced by Professor Gairdner in the terms that the state of infantile mortality was a measure of the prosperity of a nation. Mr. Hope's paper pointed out a good deal of truth about the question of nourishment, but after all the great one was what are the injurious influences affecting mothers in our large manufacturing towns? He did not quite understand Miss Todd, but he should not like it to go forth to the world that either ladies or gentlemen in that Association were favourable to the repeal of the Factories Act. He cordially thanked Mr. Taylor for his paper, coming from a place represented as having an infantile mortality of twenty-five per cent. under one year's age. He remembered when he first heard of those figures that he set himself to make inquiry into the matter, and a very short investigation showed him that the mortality was not confined

to women working in the factories. He took a block of Manchester, and tried to find the days on which the largest number of these children died; he found that Saturday was the most mortal day for children, and that it gradually improved until towards the end of the following week. Intemperance very largely affected it; he found no fewer than 112 cases of death from suffocation, arising from mothers having overlaid their children.

Mr. Baldwin Latham (London) agreed with the last speaker that the real cause of a large increase in deaths from certain causes arises from the increased quantity of alcoholic drink consumed, much of which Dr. Fergus had on the previous day attributed to the water carriage system of sewering our towns. Mr. Taylor had very conclusively shown that there were districts, not distinguished for their manufacturing industry, in which the death-rates for infants rose considerably higher than the manufacturing districts themselves, and, therefore, the inference was obvious that the statement that the work in factories inevitably produced disease was incorrect. If they took the ordinary course of nature they found that exercise was not detrimental to the health of any animal. The natural instinct of women was to provide for their offspring, and very great caution should be taken as to any legislative enactments which would render it impossible for married women to earn not only a livelihood for themselves but for their children also. He agreed with Mr. Cooke Taylor almost entirely, and also thought, with other speakers, that the real cause of infant mortality was due to neglect of sanitary conditions, and to the want of that important article, pure milk, which should be supplied in abundance to the populations of our towns.

Dr. Bond (Gloucester) said all must agree that there was difficulty in arriving at any conclusion upon this question from the result of statistics. It was quite time, however, that legislation must be founded upon facts, if, indeed, it was founded upon anything. Strongly as he felt the evils resulting from female labour in factories, he was very much opposed to bringing the law to bear suddenly upon it, when he thought a slower but better effect could be accomplished by education and those other social and ameliorating influences which were continually working around us. To the cobbler there was nothing like leather, and, therefore, he was not surprised at the stress laid upon good food for the cure of this great evil. Good food meant wholesome milk, but he was not prepared for the means suggested in order to obtain good milk. It meant a great increase in the pasture land of the country, and a corresponding diminution in that under the plough; but to turn arable land into pasture land meant to diminish the requirement for labour. This, he thought, was surely an illustration of the extreme obscurity of the question.

Mr. George Godwin, F.R.S. (London).—If any one had been, as he had the previous day, through the wynds and alleys round about them in Glasgow, in which were the dwellings of what he might very correctly term candidates for mortality, and had seen the rooms in which were stowed five times as many people as the cubic contents would healthily accommodate, he would come to the conclusion that something

more than sewage and milk is necessary in order to prevent the frightful amount of infantile mortality. There was a large amount of intelligence in Glasgow, and many men wished to bring about a remedy, but on the other hand there was a great amount of apathy. He hoped the few words he had to say would have the power of strengthening the hands of those who desired to carry out a scheme of improvement. If the mortality of Glasgow was, as stated, 28 per thousand, compared with 17 per thousand in parts of London, he was certain that in many portions of Glasgow it must be at least from 50 to 60 per thousand. In the course of his journey through their wynds and closes on the previous day 40 or 50 children were brought before him. Not one of them had half a life, but were dragging out a degraded and lowered state of existtence, which must result in dwarfish, impotent, and inefficient men and women hereafter. Here was a direction in which the Legislature might be appealed to with advantage without being open to the charge of interfering with the domestic home. Some might say they have been told this for the last ten or twelve years, and one of their local newspapers might say that the meeting was again bored with accounts of the high death-rate and the dreadful state of Glasgow; but it was so much the more shame that it had been talked about for ten or twelve years, and that such places were allowed to remain as were yet to be found in Glasgow. He expected to find that the improvement scheme had made much more progress than he found it to have done; in fact, he found that very little had been accomplished. He most respectfully implored that all those who had the means, and especially the press of Glasgow, should aid in bringing about a better state of things and pointing to its enormous results, rather than, either by a sneer or a scoff, throwing hindrances in the way of those who were urging the great importance of this question. He had been told that Glasgow was frightened at the imposition of a rate of 6*d.* in the pound; why, he asked, what was 6*d.* in the pound compared with a long doctor's bill every year and the loss of a dear life?

Mr. Macfarlane had listened with great attention to the paper, which, he thought, conclusively showed that there was no necessity for legislative interference. It had shown that the factory workers, at a time of life when they would be likely to be in a delicate condition, were no more prone to disease than another class employed in labour. Until it could be clearly shown that a permanent injury was being inflicted, it would be wrong to legislate. He felt strongly that they must be cautious. They had already launched out in a social direction, and he looked with fear on legislation which interfered with the liberty of the subject, and especially the family. They must have more definite information. They had the testimony of Dr. Gairdner that infantile mortality is greater in high life than amongst the factory workers. Why, then, was it necessary to interfere with the poor, while the rich, who were equally to blame, were not interfered with? He warned them to be cautious about following foreign social customs, for what might suit France might be very unsuitable here. There was very little exhaustive labour in the factory, while there were many occupations for women involving really hard and systematic work.

Mr. Hope, in reply, said it was impossible to provide by Act of Parliament against ladies going to four balls in a night, or calling in a substitute to perform those duties which naturally devolved upon them, but they could provide sufficient milk for the coachman's wife. Instead of increasing the area of land under pasture, his proposal would rather diminish it.

Mr. Cooke Taylor, in reply, said he had every reason to be satisfied with the discussion, for out of fourteen persons who had addressed the meeting on this subject only two had opposed the proposals he had advocated, and of these two one was a lady, and the other the President of the Association. As Lord Rosebery was not present he would not reply to his observations; but he trusted that, after his paper was published and his lordship had read it, he would either publicly or in his own mind withdraw some of his remarks. The other speaker was a lady who had done much good, but he thought the difference between them was more apparent than real. He felt compelled to mention one further circumstance of which Lord Rosebery did not seem to be aware, that for the last five and a half years he had been constantly employed in inspecting the factories in Ireland, and had therefore the best opportunities of making himself practically acquainted with the subject.

The President of the Department said there had been a great deal of instructive matter brought before them that day, and it had been very clearly shown that excesses in infantile mortality were not confined to our large manufacturing towns. Dr. Gairdner had shown that the employment of women in labour, whether in factories, in workshops, in agriculture, or in any other way, is a necessary cause of infant mortality. The death-rate among infants was the most sensitive hygienic barometer, whether it were of a factory town or a rural district. A very startling circumstance in connection with the subject was, that the barometer had been gradually falling in Scotland for some time past, and, as compared with England and Ireland, the death-rate had been increasing; but as he intended to bring that subject before the Congress in his address, he would not then further refer to it. No doubt one of the points which had been brought before the section was quite true, viz., that the crowded and unhealthy state of our dwellings had far more to do with the infantile mortality than even the employment of the mothers. Only consider for a moment how necessarily it must be so. Free, healthy air was as necessary to an animal as to a plant, and the amount of air which must pass through a room to keep it in a healthy condition was not less than 2,500 cubic feet every hour for every person in that room. Now, was there one of the rooms occupied by our working population in which such a condition of things existed, and must not the consequence necessarily be that the poor children pine and die under such circumstances? In a forest where little saplings were growing, if they could not get air, they died, and it was the same with our children. It was absolutely necessary that they should have pure air and abundance of it, and they could not get it in the condition of the dwellings at the present time. That was one of the causes of mortality, but it was not all. The ques-

tion of food was a very important one. He sat for a long time upon several committees in the House of Commons upon the mortality of children and upon nursing, and various subjects connected with children, and nothing struck them so much as the rate of mortality where the ordinary nutrition of children was not given to them. He admitted this was done by the nurses through ignorance, and not from any bad intention; but some of them, on account of this ignorance, were more effectual baby exterminators than even King Herod. But there were moral causes of infantine mortality which were very great. There were some which he would not allude to, but he might instance the mortality amongst illegitimate children in this country, which was enormous. That, however, was a cause it was hopeless to contend with unless the moral condition of the people was improved. There were others, however, which they could contend with. There was one most destructive cause, and it was the administration of opiates to children. The practice was far more extended than the public had any conception of. He saw three druggists in one street who confessed to him that among them they sold a gallon and a half weekly in teaspoonful doses for children. He could detect, in the street, opiate-drugged children, and if he followed them home he found it was a great cause of mortality. He also referred to the startling facts brought under their notice by the friendly societies' statistics, and which showed some very repulsive causes of mortality. There were many causes besides the cause of employment. But the cause of employment, where mothers were in factories and necessarily neglected their children, was a very great one. The question was very large and complicated.

WORKING MEN'S DWELLINGS.[1]

In what way can healthy Working Men's Dwellings be erected in lieu of those removed for carrying out Sanitary or Municipal Improvements, or for other purposes? By JAMES MORRISON, Chairman of the Committee of Management of the Glasgow Improvement Trust.

THE Registrar-General explains:—'Any deaths in a people exceeding seventeen in a thousand annually are unnatural deaths. If the people were shot, drowned, poisoned by strychnine, their deaths would not be more natural than the deaths wrought clandestinely by disease in excess of the quota of natural deaths—that is, in excess of seventeen deaths in a thousand living.' Mr. Simon, the Medical Officer of H.M. Privy Council, in a recent report, states, that in England and Wales *alone* 120,000 persons die every year of preventible diseases, or, in other words, through neglect of sanitary precautions.

[1] See *Transactions*, 1871, p. 523.

This fearful annual sacrifice of human life in this country through neglect far exceeds the ravages of modern warfare, however destructive its weapons; but the Mortality Tables give no real indication of the untold physical suffering, permanent loss of health, and deterioration of the human race, especially in our large cities.

This Association was instituted for circulation of information, and interchange of opinion, on questions bearing directly or indirectly on social and sanitary reform; and without presuming to affirm it as the result of these meetings, it is a remarkable fact that since their origination the enactments relating to such subjects, passed by our Legislature, exceed in number and importance those in existence for many hundred years prior.

The paper I propose under this head is one in which no speculative theory is started; the discovery of no panacea is claimed, but is simply an epitome of the measures adopted by the Municipal Authorities of this city to remove evils of the greatest magnitude and ameliorate the condition of the lower classes, as principally carried out under the 'Glasgow Improvement Acts, 1866,' in the hope that these experiences may be the means of assisting other cities similarly situated.

The high rate of mortality in Glasgow has long been a source of the deepest regret, and has engrossed the attention of the civic authorities, more or less, for the last thirty years. It arises from a variety of causes:—

I.—*The Character and Occupation of the Population.*—Glasgow is a city of large workshops and factories, or, in other words, a labouring community, and the certainty of procuring employment, in some capacity or other, attracts to it and Liverpool, more than to any cities in the United Kingdom, masses of labourers of the lowest class—the hewers of wood and drawers of water of the nineteenth century—men and women born in the thinly-peopled hills and plains of Ireland or our Scottish Highlands, living in mud huts, roofed with thatch or turf—the ashpits sometimes within and sometimes without, but never more than a few feet from the door. You can easily conceive that the retention of such habits and neglect of sanitary precautions in large centres of population originate and spread disease like wildfire.

II.—*Impurity of the Atmosphere.*—Dr. R. A. Smith, of Manchester, who recently compared the impurities in large cities, stated that while the air in the western portion of Glasgow was as pure as on the heights of Innellan—a favourite sea-coast residence—its streets and squares, as a rule, were below the average, and that in a close in Gallowgate (in one of

the areas operated on by the City Improvements Trustees, but not the most overcrowded in that district), the chemical impurities, to use his own words, were the same as 'in a midden in Manchester.'

III.—*Density of Population and Overcrowding.*—The Registrar-General's returns prove that density is one of the great causes of high mortality. After making reasonable allowance for difference in character of population and impurities of atmosphere, it will be found that the rate of mortality in large cities is proportionate to density, but the comparative mortality of large cities with each other does not illustrate this so strikingly as a comparison between various districts of the same city, where, in addition to density, you have overcrowding of the worst class of population, huddled together in unhealthy houses. This is explained very clearly in the Report of the Sub-Committee on the causes of the excessive mortality in Liverpool, who, in 1866, state:—'Assuming overcrowding to mean not only the existence of too many people in a room or in a house, but also the massing together in narrow ill-ventilated streets and squalid courts too great a number of houses; and also assuming, what is incontrovertible, that such overcrowding, by its effects on the physical condition of the people, tends to encourage intemperance, immorality, and indigence, the remedies appear to be—to provide decent dwellings for the labouring classes; to break up those masses of crowded dwelling by driving thoroughfares through and across them to let in the light and the air.'

IV.—*Infant Mortality,* which increases most rapidly in the conditions fatal to our adult population.—Professor Gairdner says:—'Given a community in which the infants die with extreme rapidity, and in which the general death-rate is also high, you have, in the fact of the high infantile mortality, not only a corroborative proof of the defective sanitary conditions operating on the entire population, but, in proportion as the infant mortality is higher than the average of places having the same general death-rate, you have proof of defective sanitary conditions operating specially on the young life, in all probability through the neglect, or vice, or ignorance of the parents.' In Glasgow one in every ten of the children under five years of age die each year.

I have thus endeavoured concisely to point out four of the leading causes of the high rate of mortality, and shall now bring under notice the condition of 'Ancient Glasgow,' in the centre of the city where the evils enumerated existed, and still exist (being only very partially remedied) in their most

aggravated form, and, in doing so, shall quote the description of these plague spots, from the pen of our Lord Provost, Sir James Watson, who has taken the deepest and most active interest in this question for many years, and brought it under the notice of the Social Science Congress while here in 1860.

'From each side of the streets in the districts referred to (*i.e.*, Gallowgate, High Street, Saltmarket, Trongate, &c.), there are narrow lanes or closes, running, like so many rents or fissures, backwards to the extent of sometimes 200, sometimes 300 feet, in which houses of three and four storeys stand behind each other, generally built so close on each side that the women can either shake hands or scold each other, as they often do, from the opposite windows. When clothes are put out from such windows to dry, as is usually done by means of sticks, they generally touch each other; the breadth of these lanes is in most instances from three to four feet, the expense of the ground having at first induced the proprietor to build upon every available inch of it. Throughout the whole of these districts the population is densely crowded—in many of the lanes and closes there are residing in each not fewer than 500, 600, and even 700 souls; and in one case we observed thirty-eight families, or nearly 300 persons occupying one common stair. In the Tontine Close, on the north side of Trongate, there are nearly 800 of the most vicious of our population crowded together, forming one immense hotbed of debauchery and crime. This close has obtained of late an unenviable notoriety; but there are others equally bad both in Gallowgate and some parts of High Street.' . . .

'The effect produced on the physical condition by overcrowding must be apparent; and when disease of a contagious nature breaks out its ravages become frightful. The moral disease is still more appalling. In such houses as those described, where men and women occupy the same apartment, virtue and morality are impossibilities. As well might we expect the plant to flourish when deprived of the refreshing light and dews of heaven, as that virtuous life could exist in such a region. Living in a tainted atmosphere, without either the decencies or conveniences of life, surrounded by a mass of poverty and dirt, without contact with anything in the locality to elevate or stimulate to improvement; without, as has been well expressed, anything to remind one either of God or nature, it would be strange indeed if these districts were not to show, as they do, only the characteristics of pauperism, intemperance, and crime. We question if in any city of Europe the vicious are allowed

to congregate together in such clusters as in the city of Glasgow; and in no city that we are aware of are such facilities given, by means of the buildings and localities, both for hatching and perpetuating vice and crime.'

This, then, was the condition in 1865 of what may be designated 'Ancient Glasgow,' covering an area of about 88 acres in the centre of the city, where a population of 51,304 was packed together at the average rate of 583 persons to the acre, in upwards of 10,000 houses, the walls of which were permeated with disease. The population of the whole city in 1865 was 423,723, so that fully twelve per cent. occupied houses in every sense of the word unfit for human habitation, rapidly spreading moral and physical deterioration. The death-rate over the whole city was, as might be expected, 32·8 to the 1000, which increased in 1869 to 34 to the 1000, and the average death-rate of the 88 acres specially alluded to was 38·64 to the 1000. These figures still, however, fail to convey an adequate idea of the rapidly increasing over-density. The Improvement Scheme comprises 40 areas, in the worst of which, and in portions of the others, the population was housed at the rate of 1000 to the acre, or 640,000 to the square mile. In these plague spots and fever dens the death-rate was as high as 52·21 to the 1000 in 1865. In 1870, before demolition commenced, it rose to 70 in the 1000.

The powers under existing public legislation were totally inadequate to enable the authorities to remedy evils of such magnitude. It is quite true that, under the 'Nuisance Removal (Scotland) Act, 1856,' and the 'Public Health (Scotland) Act, 1867,' power is given to compel proprietors to remedy—

(*a*) 'Any insufficiency of size, defect of structure, defect of ventilation, want of repair, or proper drainage, or suitable water-closet, or privy accommodation, or cesspool, or any other matter or circumstance rendering any inhabited house, building, premises, or part thereof, injurious to the health of the inmates, or unfit for human habitation or use;'

(*f*) And further, to shut up 'any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates.'

But the expense connected with the legal proceedings before the Sheriff, and the protracted litigations certain to arise, in many cases, before the repairs or structural alterations needed could be agreed on between parties, or decided by the Sheriff, deterred the authorities from beginning a series of prosecutions on such an extensive scale; besides which, it must be borne in mind, that a large proportion of

the properties were held by trustees for the benefit of widows and orphans, who, deprived of the revenue on which they were dependent for annual maintenance, would have been pauperised. In these circumstances, after an abortive attempt by several public spirited citizens to deal with the worst portion of the evils at their own risk and expense which failed through want of compulsory powers of purchase, the Corporation, with the consent of the inhabitants, applied for a special Act of Parliament to purchase the properties, paying fair compensation to the heritable proprietors, on the footing of a compulsory sale, the value thereof, failing arrangement by private negotiation, to be fixed by arbiters or a jury.

Plans were prepared, showing the properties to be taken, and parliamentary notices, in the usual form, were served on all the heritable proprietors whose property was needed, none of whom opposed the bill.

The value of the property scheduled is upwards of 1,500,000*l.*, and the preamble of the Act narrates:—

'Whereas various portions of the city of Glasgow are so built, and the buildings thereon are so densely inhabited, as to be highly injurious to the moral and physical welfare of the inhabitants, and many of the thoroughfares are narrow, circuitous, and inconvenient, and it would be of public and local advantage if various houses and buildings were taken down, and those portions of the said city reconstituted, and new streets were constructed in and through various parts of the said city, and several of the existing streets altered, and widened, and diverted, and that in connection with the reconstitution of these portions of the city, provision was made for dwellings for the labouring classes who may be displaced in consequence thereof.'

The trustees are the members of the Town Council, and the operations are managed by a committee, who report their proceedings to the general trustees.

The compulsory powers of purchase are confined to the properties scheduled, and there is no power to remedy evils of a similar character in any other portion of the city, except the general provisions of 'The Public Health (Scotland) Act.'

The areas selected are coloured *green* on the map of the city, hanging on the wall.

The Act was passed in 1866, and the purchasing of the property needed commenced with vigour; but it was 1870 before any improvements of an extensive character could be begun, the trustees finding that if they proceeded with recon-

struction before having acquired at least the greater portion of the property, they would materially increase the value on themselves.

The operations, when completed, involve the purchase and demolition of upwards of 10,000 houses, which no structural alterations, however extensive, could make healthy residences; the gradual removal and spreading of the population resident there; the laying off the ground in open spaces, and formation of forty new streets to be cut through the centre of the districts; removing sanitary evils and affording commercial facilities; and the resale of the surplus lands for the erection of modern buildings, subject to the conditions, provisions, and restrictions of 'The Glasgow Police Act, 1866,' and the authority of the Dean of Guild Court. A plan *showing the alterations* of one of these areas has been prepared, and hangs on the wall for inspection.

To prevent individual hardship Clause 28 was inserted in the Act, under which the trustees cannot eject within six months any number of the labouring classes exceeding 500 without a certificate from the Sheriff, granted on evidence furnished by the trustees that sufficient accommodation has been provided or exists within the city or in its immediate neighbourhood for the population displaced.

For the purposes of the Act the trustees are authorised to borrow 1,250,000*l.* on the security of the assessment and property acquired by them; and as a proof of the monetary confidence in the measure, loans to an extent far in excess of their requirements have been freely offered them at a lower rate of interest than is usually paid in Scotland on heritable security.

The sum originally estimated to be assessed, as the cost of the improvement, involved an authorised tax of 6*d.* per pound on rental for five years, and 3*d.* per pound for ten years; but the operations of the trustees have been carried out more successfully than was anticipated, and the rate of taxation has been reduced as follows:—6*d.* per pound for one year, 4*d.* per pound for four years, 3*d.* per pound for two years, and 2*d.* per pound for eight years. This difference of the assessment produces about 177,000*l.* less than the trustees would have received under the original scale, but the sum at their disposal will be sufficient for the purposes of the Act. It will thus be seen that these evils, many of which were the growth of centuries, fell to be remedied by the ratepayers during fifteen years; and it is now generally admitted that the dissatisfaction freely expressed on this point had reasonable foundation, and

it would have been more equitable to have extended the period of assessment over a longer series of years at a lower rate.

The assessment for city improvement is in addition to a tax of 2*d.* per pound for general sanitary purposes, so that the ratepayers expend about 40,000*l.* per annum in their attempts to ameliorate the condition of the people, and lessen the high rate of mortality.

Although possessed of compulsory powers, and entitled to take possession of the properties under statutory notice, the trustees deemed it politic to purchase the properties, as far as practicable, by private negotiations. The various proprietors, or their agents, were waited on by an employé of the trust, and offers solicited; on obtaining which the property was inspected and valued by two of the trustees, with competent assistance, and, on their report, the committee either accepted or declined the offer made. As a proof that these negotiations have been fairly conducted on each side, I may mention that up to August 31st upwards of 1,000 tenements have been purchased, at a cost of 1,241,353*l.* 17*s.* 9*d.* Only sixty-four of these were referred to arbiters, and even of these many were *pro forma* rendered necessary for the personal protection of trustees or agents, in the absence of beneficiaries, or from some unavoidable cause.

In these circumstances, we feel quite entitled to assume that our operations have had the moral sympathy of the owners, who, recognising its necessity, have, with very few exceptions, thoroughly acquiesced in the means employed for the protection of the health and lives of the citizens.

The Committee of Management, on the other hand, have never used the power entrusted to them by the Legislature to the prejudice of the private rights of any individual. It would, however, have been simply impossible to make progress without compulsory powers, the possession and judicious use of which is indispensable to any community similarly situated; and all public or private efforts conducted without these, if on an extensive scale, must fail.

The changes to be effected will extend over a period of probably not less than twenty to twenty-five years. Although the time is limited during which the Trustees must either acquire the property or serve notice of their intention to do so, there is no limitation as to the period of reconstruction, which can only be proceeded with gradually. Very great discretion is needed to prevent needless sacrifice of revenue by too extensive demolitions at one time, which would also

create disturbance to business in central districts of the city, and personal loss.

The gradual displacement of the population has been successfully accomplished up to this time, and no case of individual hardship is known.

This will be even less difficult in the future, the new properties erected on the line of the improvements affording better accommodation in the same locality, with increased commercial facilities arising from the improved accesses formed.

While satisfied that it would be an error in judgment to push reconstruction too quickly, and that a long period must elapse before the scheme could be completed, the authorities, alarmed by the increase of the mortality in 1869 to 34 per 1,000, felt it their duty to cope with the difficulty as far as possible without further delay, and expended large sums in what I might characterise as temporary remedies, whitewashing, cleansing, ventilation, purifying, asphalting, and causewaying courts, &c., &c.

The most important of these operations consisted in thinning the ground by demolition of the worst houses; selecting, where practicable, the centre row of each three long parallel rows of tenements; displacing in about four years, 1870 to 1874, about 15,425 persons, who have found more healthy residences to their own advantage and to the advantage of those remaining in the localities so thinned.

The present time is perhaps the best to form an idea of the character and extent of our operations. The objectionable buildings remaining will give anyone who visits them a conception of those demolished, and the marks on the ground show where these formerly stood. All present are earnestly invited to visit the localities, as an hour's inspection will give a more just conception of the evils and remedy than can be formed by any other method.

It is difficult to believe that districts through which you may now walk during daylight with perfect safety and confidence were formerly the scene of many murders, robberies, and assaults of the most aggravated character.

The intricate network of houses then existing, now partially broken up, consisted of miles of alleys, or 'closes,' as they are termed in Scotland, on an average not more than three or four feet wide, with lofty dark tenements on each side, forming a series of communicating fortresses, from which the criminal classes sallied with comparative impunity at night to ply their nefarious practices, having at hand facilities of escape and refuge. So much was this the case that in 1867 the crimes

reported to the police rose to the highest point ever attained, and were of a more serious character than at any previous time in the history of the city, and were rapidly increasing.

The diminution of crime in subsequent years is largely due to the clearances made, which gave the police control and supervision over the criminal classes, as will be shown by the following Table, keeping in view that the demolition of houses was trifling in 1868 and 1869, and that it was 1870 before this was carried out to any extent.

The following extract from the official 'Criminal Returns,' shows the number of crimes reported to the police as having been committed in the city of Glasgow during the years 1867, 1868, 1869, 1870, 1871, 1872, and 1873; also the number of persons apprehended and convicted for the same:—

Year	Total crimes reported	Total Apprehensions	Per Centage	Total Convictions	Per Centage
1867 . .	10,899	5,042	46·2	2,975	27·2
1868 . .	10,594	4,726	44·6	2,996	28·2
1869 . .	9,394	5,228	55·6	3,122	33·4
1870 . .	8,702	5,077	58·3	3,000	34·1
1871 . .	7,521	5,046	67·0	2,872	38·2
1872 . .	7,946	5,287	66·5	3,128	39·3
1873 . .	7,869	5,791	73·7	3,526	44·8

Taking the highest and lowest for comparison, to bring out the result:—

Year	Crimes Reported	Apprehensions	Per Centage	Convictions	Per Centage
1867 . .	10,899	5,042	46·2	2,975	27.2
1873 . .	7,869	5,791	73·7	3,526	44·8
	3,030 Less cases of Crimes reported.	749 More Apprehensions.		551 More Convictions.	

The population in 1867 was 440,979, and in 1873, 498,462, so that the crimes reported in ordinary circumstances would have increased instead of diminished.

The following extract from the official 'Criminal Returns,' shows the number of thefts reported to the police as having been committed within the City of Glasgow by prostitutes or

in brothels, during the years 1867, 1868, 1869, 1870, 1871, 1872, and 1873:—

1867	1192	1871	458
1868	1246	1872	227
1869	1146	1873	264
1870	807		

Or, in other words, in this class of crime, instead of 1,192 cases in 1867, there were reported in 1873 only 264, showing a diminution of this class of offence of 928 cases in seven years.

Captain M'Call says, in his official 'Criminal Returns' for the year ending December 31, 1871:—'I would consider I fell short of my duty in this Report were I not to acknowledge that the operations of the City Improvement Trustees, and the Directors of the City Union Railway, have contributed to the results. Through these operations the city has been cleared of the foulest dens of crime and profligacy, and their occupants been scattered amongst a population breathing a purer moral atmosphere, thereby affording facilities to the police for bringing the vicious to justice more easily and certainly than when the whole formed a concentrated and combined colony of ruffianism.'

The effect of the operations on that portion of the population hanging on the borders of crime, who, by reason of their circumstances and surroundings, are under the strongest temptations to swell its ranks, it is impossible even to estimate, but many hundreds, if not thousands, must have been saved from contaminating influences.

In one area alone, in 1873, no less than thirty-six shebeens and two brothel-keepers were expelled by the instructions of the Committee, who co-operate with the police in repression of crime, expelling all parties leading an immoral life and living by dishonest practices from their property. These, in many cases, have been compelled thus to lead honest lives, and are working as out-door labourers to their own personal and family advantage, and the gain of the community.

It was feared at one time that the dispersion of the low class population might have a tendency to spread crime and disease, and was a most dangerous experiment. None of these fears have been verified; on the contrary, the Police and Sanitary Inspectors have repeatedly certified that the whole condition of the population displaced has been improved, and, although paying higher rents in other districts of the city for houses worthy of the name, they are themselves satisfied of the advantages of the change.

The Committee of Health, elected by the Police Board in 1870, and the officials under their charge, have been of the greatest assistance in these beneficial changes. Without close supervision the pulling down of buildings would not have spread the population, who cling to their old haunts as long as possible, and the density would have been intensified by overcrowding of two or more families in one house to the detriment of the health of all; but the supervision of the Sanitary Inspectors, and the prosecutions before the magistrates for such practices, has reduced this to a point so low as almost to imply extinction shortly. I may here also notice, as an indication of the progress of public opinion on sanitary matters, that we have at present more complete organisation for coping with epidemic disease than it has ever been in our power to possess, and hospital accommodation which, if plain, is good and abundant.

I shall now give one example of the efficacy of the operations in controlling epidemic disease, selecting a district in which all the evils which produce the highest rate of mortality are intensified, the population physically and morally being of the very lowest type.

The district selected is one known in Glasgow as the Havannah and New Vennel, off High Street, which I hope some of you may be induced to visit. The population in 1865 was 3,033; in 1871 it may be assumed in round numbers as 3,250. The ground measures, as near as possible, 3¼ acres, so that this low class population, with the worst habits, was huddled together at the rate of 1,000 to the acre. Very little property was purchased there by the Trustees till 1870-1871, the prices asked by the holders being in excess of the value which the Trustees considered should be paid for that class of possession; and it was the end of 1871, or, rather, early in 1872, before they were in a position to begin operations, and the results of these are startling. In 1871, 303 fever patients and 16 small-pox patients were removed by the authorities to their hospitals, and treated at the public expense—in all 319, or nearly 10 per cent. of the population; so that, humanly speaking, in about eleven years every soul in that block, the circumstances remaining unaltered, would have been dealt with as fever or small-pox patients at the public expense, the death-rate being 70.

In 1872 the partial demolition and temporary remedies, to which I have already alluded, were instituted, and the fever cases were reduced to 62, small-pox 1—total 63; death-rate being reduced to 57. In 1873, when further operations in the same direction, which, it is fair to remember, reduces the

density and lowers the risk of contagion, there were only 5 cases of fever and 17 cases of small-pox, then epidemic—in all, 22 cases, death rate 54; so that, as a precautionary measure for curtailing the ravages of epidemic, the destruction of houses unfit for human habitation, and spread of population, is not only one of the best, but appears to me to be in the end the cheapest of all remedies.

If the opinion I have expressed on the importance of such operations in large cities is correct, then there remains no doubt but that the general powers conferred by the Legislature on Municipal and Local Authorities might, with great propriety, be extended, especially the privilege of compulsory purchase of properties, the removal of which would tend to control the spread of epidemics, or which, in the opinion of the Medical Officer of Health, were permanently unhealthy.

I am further inclined to advocate that Municipal and Local Authorities might be allowed, should they deem it necessary, to erect buildings of a better class in lieu of those removed, where needed, to accommodate the population dispossessed, such a clause being permissive and not compulsory, as in Clause 23 of the 'Glasgow City Improvements Act.'

As a rule, however, it is not judicious for an elected body, changing periodically, to undertake the erection of buildings which demand close attention for successful prosecution, and such a course is calculated to check private enterprise, which, in all ordinary circumstances, is usually sufficient to supply the wants of the community.

In Glasgow, for example, 3,085 houses have been demolished by the City Improvement Trustees, displacing an estimated population of 15,425; to provide for which and the natural growth of the city, 26,794 houses have been erected within the Municipal boundaries, under the provisions, conditions, and restrictions of the 'Glasgow Police Act,' under the authority of the Dean of Guild Court, from June 19, 1866, to August 31, 1874, which are estimated to accommodate 133,970. This does not include the numerous buildings in the immediate outskirts of the city.

The propriety of erecting dwelling-houses for the working-classes from the funds collected by taxation has been often discussed by the Trustees, and invariably negatived by large majorities. The only exception being the erection of male and female lodging-houses as a measure of self-defence for protection of health. I find that in 1847 an appeal was made to the public spirit of Glasgow in a report, which I shall quote, as its language is both truthful and concise:—

'It is perhaps not generally known that a large portion of

the dwellings of the poor in the wynds and streets upon the south side of the Trongate, in the High Street, Gallowgate, Calton, &c., consist of lodging-houses, and constitute the very worst parts of these localities. A large number of them are literally crowded with inmates; men and women are promiscuously huddled together; there is a total absence of everything like ventilation, cleanliness, or what is necessary to contribute to the common decencies of life; and too often they are the haunts of immorality and vice. In many of these places fever is at present raging with fearful severity, yet the healthy and diseased often inhabit the same apartments; and no sooner is a bed empty by the removal of a patient to the hospital, than it is occupied by another lodger, and this without any change of bed-clothes, if such wretched rags as are used as substitutes deserve the name! That fever should continue to spread under such circumstances is not to be wondered at. Persons occupying such houses carry infection along with them to the various parts of the city, and no class of the community can protect themselves from such contagion. The question, therefore, occurs—Can anything be done to remedy these serious evils? Certainly the most effectual remedy would be to remove the receptacles referred to, and substitute proper houses in their place. This, however, appears at present impracticable. Next to it, probably the most effective remedy would be the enforcement of police regulations, by which the number in each house would be restricted, the healthy kept separated from the diseased, cleanliness required, and a freer current of air admitted. Such, however, is the want of lodging-house accommodation, that the police have ascertained that, until additional accommodation can be provided, it is altogether impossible for them to enforce such regulations; and Mr. Wilson, of the police, states that, were they to do so, they would turn nightly to the street not less than 5,000 persons.'

With the laudable intention of mitigating these evils, a Committee was appointed and an Association formed to erect lodging-houses for this loose, floating population; and it is worthy of remark that the gentlemen who faced these evils in 1847 at their own risk, and have erected and managed several of these lodging-houses so successfully for twenty-seven years, were the most prominent in attempting, on a much larger scale and at considerable personal risk and trouble, the renovation of Glasgow from 1860 to 1866, prior to the passing of the Improvements Act; our Lord Provost, Sir James Watson, being Chairman, and the late ex-Provost Blackie one of the Directors.

The present accommodation afforded under the management of this Association is about 600 nightly.

The importance of these Institutions was very soon recognised by the municipal authorities; and on the application to Parliament in 1866 for the City Improvements Bill, power was asked and granted for the erection and management of such public lodging-houses by the City Improvement Trustees. We have built and furnished only two yet, one for males, capable of accommodating about 300 nightly, and the other for females, accommodating about 100 nightly. In each there is a large day-room, lavatories, &c. Each inmate has a separate bed in small detached compartment for their exclusive use. Great attention is paid by the matron and superintendents to cleanliness and ventilation. The charge was originally 3*d.* per night, but increased lately to 3½*d.* per night, including use of large cooking ranges, &c. They are so managed as to be self-supporting, including five per cent. interest on the capital.

The houses are inspected at least once a fortnight by members of committee in rotation. The accommodation, though very plain, is superior in every respect to the low class dens superseded. The stringent rules for maintenance of order are rigidly enforced.

I wrote Mr. Dickson, the Secretary of the Lodging-houses under the management of the Association alluded to, asking if there had been epidemic disease in any of their establishments since 1847, upwards of twenty-seven years ago, and in reply, on September 14, 1874, he states:—

'With reference to your inquiry as to whether we have ever had any fever or epidemic disease in our lodging-houses, I have great satisfaction in stating that we *have had none whatever*. There may have been a case now and again of a lodger having to be removed to the hospital, but such cases have invariably been those of persons suffering from disease before coming into the house. The superintendents have instructions to remove any person at once to the hospital who may appear to be suffering from any disease—infectious or otherwise.'

Our experience is similar. Since our buildings were erected in 1870 there has never been a single case of fever or epidemic disease in either of the houses. You will thus observe that about 1,000 of the worst class of loose, floating population are comfortably housed every night, who, formerly uncared for, were the principal means of spreading epidemics, demonstrating the wisdom and advantage of such care.

This character of accommodation, after such experience, I

consider indispensable in all large centres of population, and every encouragement and power ought to be given to municipal authorities for such purposes.

In 1872 the Town Council of Glasgow promoted a second Bill, which was sanctioned by the Legislature, for further improvements in other districts of the city, involving the purchase of property to the value of 250,000*l.* for demolition and reconstruction.

The operations under 'The Streets Improvement Act, 1872,' are being carried out in the precise manner I have already described under the previous Improvement Act, so that I shall not detain you with observations of a repetitive character.

In conclusion, allow me to add—that the various remedies alluded to are in their infancy. The progress made may be apparently imperceptible, and it must be at least fifteen or twenty years before the advantage of these measures can be fully obtained. Many may be discouraged, and think the efforts to reduce mortality and crime have not succeeded. In estimating this, however, it should be kept in view that before these operations commenced the strong tide of disease and crime was rapidly increasing, and that if we have only checked its growth and arrested its progress, we have done a noble work. All the results beyond that are a mere indication of greater benefits in the future. The greatest obstacle to progress is the vice, ignorance, or apathy of the class sought to be benefited, and as education spreads their co-operation will be secured.

On the same.[1] By Rev. R. J. Simpson, M.A., Rector of St. Clement Danes.

THAT the age in which we live is characterised by many philanthropic efforts to promote the moral, social, and religious improvement of the people, there can be no doubt. But it is equally certain that at this advanced stage of civilisation, and in this Great Britain of ours, one of the foremost among nations, there are at this moment thousands of the labouring poor inhabiting, or rather herding in, dwellings scarcely fit for 'the beasts that perish.' Such a state of things, found especially in our large and thickly populated towns, is dangerous to public health, is a serious impediment to the progress of morality

[1] This paper has been printed more fully in *Public Health* for January 1875.

and education, and is a grave reflection on our common Christianity.

Let me glance, in passing, at two or three of its inevitable results.

1. Every pulpit and platform rings (not unnaturally) with 'loud and deep' denunciations of the fearful amount of drunkenness amongst our labouring population. Many speakers and hearers would cease to wonder at it, and see more to deplore, if they would go into some of the low, ill-drained, ill-ventilated courts of our great towns, and sit down for an hour in some of those fetid dens in which a family of eight inhabits a room properly capable of accommodating two persons. What wonder if the enervating influence of such an atmosphere drives the toil-worn and languid labourer to seek some stimulant to give him artificial life, and if, from the filthy, dark surroundings of his own home, he flies for refuge to the trim parlour and the brilliant glare of the public-house.

No more prolific causes of drunkenness are to be found than a foul dwelling and its almost invariable concomitant, a comfortless home.

2. We hear many complaints in the present day of the character of our servants. I do not wonder; but I would ask, what kind of servants do we expect to procure out of such dwellings as I have described?

Can we expect that young women who have all their lifelong been accustomed to all that is slovenly, disorderly, and filthy, will become suddenly qualified to prepare our food, and to attend to the requirements of a respectable home? Or that those who have been brought up in a moral atmosphere in which vice has become familiar and the common decencies of civilised life have died out, will at once throw off the habits of years, and be fitting caretakers and companions of our children? If we do expect such a result, we must be prepared to accept the awful superstition, that while we are quietly standing by to see one of God's great laws systematically violated, He will work miracles for our personal convenience.

3. What kind of children do we look for from such dwellings, whether we regard their physical condition, their mental culture, on their moral and religious training?

The most superficial acquaintance with the facts of mental philosophy will teach us the great importance of the laws of connection in our thoughts, feelings, and emotions. Amongst the almost countless states of the mind there is not perhaps one which can be truly said to be independent and alone. That law of the mind by which places, scenes, and events suggest

trains of emotions, and by which one thought suggests another, constitutes a creative power, the complex effects of which are literally beyond all estimate. It throws a light wholly its own over life and the universe, giving new beauty to the beautiful, and brightening even the darkest forms of fancy or reality, as the sunlight tinges with its rich and varying hues the floating cloud. Habits of thought, the effects of which are felt for ages, sometimes spring from peculiar associations. If, therefore, we neglect the power of association in the process of forming the young mind or heart, we throw away a great source of strength; and to a great extent this is under our command or, at least, our influence. The tastes of children may be guided, if not created, by the mental connections they are accustomed to form with the objects and events around them; the impression continually conveyed by the eye and the ear to the mind and heart becomes deeper and deeper; these are gradually and insensibly, but surely, moulding, fashioning, and educating the child. This secret, silent power may forge slowly, link by link, chains which afterwards the strength of manhood may in vain struggle to rend asunder. Looked at in the light of this truth, how can we wonder that the poor little children that are at this moment pent up in foul dwellings, amid sights and sounds fouler still, or roaming about our streets and lanes uncared for in body, soul, or spirit, are in training for our gaols, reformatories, and workhouses.

We have passed two great Education Acts, and are spending millions on elementary education. The State has nobly risen to its responsibilities so far, but will it not be throwing away thousands of public money if, side by side with our great schools, it permits to exist thousands of training-schools of vice—if it allows the five hours' instruction of the school to be more than neutralised by the nineteen hours' education of the degraded home?

Is it possible for the teacher or the minister of religion to make any real progress in the training up of good, decent, honest men and women from amongst children who, for the greater part of the twenty-four hours, cribbed and confined in a loathsome dwelling, where every barrier of decency is broken down, are compelled to be witnesses of, if not partakers in, the vilest impurities of word and deed?

Reading, writing, and arithmetic cannot work a moral regeneration, and even the Bible taught in our schools will probably bring but poor fruit to the Church or the State, if followed by the pernicious influences of a demoralising home.

The 'religious difficulty' is as nothing compared with the

home difficulty, and the home difficulty is increased a hundred-fold by the house difficulty—in other words, by the want of dwellings affording healthy and decent accommodation to our labouring poor and their families.

I have a strong conviction that this disease is at the root of many of the social evils of which we complain, and which we seek to mitigate or remove in vain. It is of no use to sever a few fibres of the upas tree unless you also lay the axe to the sap root.

I stop not to inquire how such a state of things has grown up, or who is to blame for it, but pass on to consider what has been and is being done to remedy the evil, and what is the most advisable course of action to be adopted in the future.

I have had many painful opportunities of examining the wretched dwellings of the poor in many of the towns of England, such as London, Liverpool, Leeds, Manchester, Sunderland, Newcastle, Windsor; but in two at least of these towns I have seen noble efforts to improve them. I allude to the borough of Windsor and to London, in both of which I have laboured for several years as a clergyman.

In Windsor it was that, at an early period, that great and good man the late Prince Consort, of happy memory, built model cottages for the poor, where they still remain amongst the many proofs of that prince's tender care for the poor, of his intuitive perception of their habits and wants, and of his marvellous grasp of details.

'Si monumentum quæris, circumspice.'

He felt that this was a social problem, on the right solution of which depended much of the happiness of the people and the prosperity of the nation; and never did I mourn the prince's loss more than when, many years after, some forty or fifty families were swept away from 'Spring Gardens' to make room for a barrack square. Albert the Good was not there to aid them. Several families had occupied their holdings for ten, fifteen, twenty, and even twenty-five years; but I am bound to add that from the plot on which they lived fever, diphtheria, and small-pox were rarely absent.

In London, successive endeavours have been made to supply the poor with good dwellings at a moderate cost by 'The Society for Improving the Condition of the Labouring Classes' (1844), presided over by the noblest and most unwearied working man in England, I mean the Earl of Shaftesbury, 'The Metropolitan Association for Improving the Dwellings of the Industrious Classes' (1845), 'The Parochial Association

for Improving the Dwellings of the Labouring Classes' (1849), 'The Marylebone Association' (1854), 'The Strand Buildings Company' (1857), 'The Central London Dwellings Improvement Company,' 'The London Labourers' Dwellings Society, Limited' (1861), and 'The Improved Industrial Dwellings Company, Limited' (1863). These voluntary associations, though they have had one end in view, differ from each other in many particulars, which I will not now stop to enumerate; suffice it to say that, actuated by philanthropic motives, they yet mainly proceed on the lines of commercial enterprise. They testify to the deep practical interest taken in the subject by general and thoughtful men; they have formed a noble vanguard in the army of progress, and have not only founded admirable dwellings for thousands of our poor people, but have shown what can be done in this matter, and how in this, as in many other cases, an enlightened philanthropy, acting on sound commercial principles and with judicious management, can 'profit a man,' even in the lowest sense of the significant and comprehensive term. I will not venture to enter upon financial details, but I may say that in most of these associations a dividend varying from 4 to 6 per cent. is paid on the capital invested, and this with great regularity and very little risk of falling off. The operations of these excellent associations have also gone far to indicate the most useful, convenient, and economical structural arrangements for labourers' dwellings by drawing the attention of some of our most eminent men to this particular class of buildings, and giving us the result of nearly thirty years' practical experience.

In the same direction, but acting on a more exclusively philanthropic basis, we note with admiration and thankfulness the grand gifts of the Baroness Burdett-Coutts and Mr. Peabody. These names, with those of the late Prince Consort and the Earl of Shaftesbury, must ever be associated with this greatest and most necessary of all reforms.

I must not omit to mention the excellent work of Miss Octavia Hill, in improving and adapting old dwellings to the wants of the poor, and making them commercially successful by a return of from 5 to 6½ per cent. on capital, after payment of all expenses.

But while we duly value the individual generosity, the philanthropic zeal, and the associated enterprise that have been brought to bear on this work, we are bound to confess that the actual result is but a fraction, a sample of the gigantic work that remains still to be done; and while these efforts have successfully solved many of the problems that had perplexed the

minds of men who had given special attention to this subject, they have clearly demonstrated the points on which we are weak, if not powerless. Above all, they have revealed the fact that in London (and probably the same is more or less applicable to all large towns) you cannot successfully provide suitable dwellings for the poor, either by individual or associated enterprise, without the assistance of special powers of sale and purchase.

It is to this point I would desire specially to direct the attention of members of this association.

And here I am naturally reminded of an important event in the history of this question which deserves special mention, and the benefical results of which are not only already apparent, but are very difficult to estimate in the time to come.

In the early part of the year 1873 the Council of the Charity Organisation Society of London formed a committee of Members of Parliament and others, in order to consider what action should be taken to improve the dwellings of the London poor. They met at first under the presidency of Sir Sydney Waterlow, the then Lord Mayor, and held fifteen sittings, principally presided over by Lord Napier and Ettrick. We had the benefit of the presence and counsel on the committee of many of the most eminent practical men—of some who have devoted their lives to this subject. Our report is published, and will be found useful and interesting, not the less so because the noble lord who presides over the education department of the association had a large share in drawing it up, and some of the most important evidence on which it is based was personally given by the Lord Provost of Glasgow. Two of the conclusions we came to were the following:—

1. That the mass of the poorer classes must be provided with habitations near their work.

2. That the only agency which can carry out this great work, with due regard to the moral and physical welfare of the people, is municipal government, acting with enlarged powers, and through the instrumentality of commercial enterprise, partly in its individual, but chiefly in its associated form.

Subsequent to the publication of the report, our committee had an interview with the Home Secretary, who received us most favourably; and one of our committee, Mr. Kay-Shuttleworth, M.P., in an able and exhaustive speech, subsequently brought the subject by way of resolution before the House of Commons. On this occasion Mr. Cross, representing the opinion not only of the Government but of the House, expressed his great satisfaction at the movement that had been made, and

accepted on behalf of the Government the responsibility of bringing in a measure next Session dealing with the whole question; and in order to give us an earnest of his sincere intention to carry out his promise, he moved, on July 30, the following modification of the Standing Orders, which was unanimously carried:—

1. In the case of any Bill for making any work for the construction of which power is sought to take in any city, town, or parish, fifteen houses or more, occupied either wholly or partially, as tenants or lodgers, by persons belonging to the labouring classes, the promoters be required to deposit in the Private Bill Office, on or before the 31st day of December, a statement of the number, description, and situation of the said houses, the number (so far as they can be ascertained) of persons to be displaced, and whether any, and what provision is made in the Bill for remedying the inconvenience likely to arise from such displacement, and that such statement be referred to the Committee on the Bill.

Notice to Occupiers by Placards.

2. In every such Bill a clause be inserted to enact that the Company shall, not less than eight weeks before taking any such houses, make known their intention to take the same, by placards, handbills, or other general notice, placed in public view, upon or within a reasonable distance from such houses, and that the Company shall not take any such houses until they have obtained the certificate of a Justice in England and Ireland, and of the Sheriff in Scotland, that it has been proved to his satisfaction that the Company have made known their intention to take the same, in manner required by this provision.

Clause to be inserted in Bills.

3. In every such Bill a clause shall be inserted, if applicable, requiring the promoters to provide, within the time limited for the completion of the work, sufficient accommodation for the persons belonging to the labouring classes who will be displaced by improvements authorised by the Bill.

Committee to report specially on displacement of Houses.

4. The Committee upon every such Bill shall report specially to the House—

1. Whether such clauses have been inserted in the Bill; and, if not, the grounds upon which the Committee have decided them to be inapplicable.
2. The several circumstances affecting the displacement of houses by the operation of the Bill, and the means by which other accommodation is to be provided for the persons to be removed.

This was a most important step.

Philanthropy may do much in giving an impulse to such work as this; voluntary agency may follow in its wake and show what can be done; landlords, like Mr. Salt, Mr. Ackroyd, Lord Westminster, and the Duke of Bedford, may give great facilities for action, and wealthy and large-hearted individuals may bestow princely gifts; but all these combined cannot grapple with the awful aggregate of filth, disease, vice, and misery, huddled together in a seething mass of corruption in many of our large towns, or contend effectually against the complicated claims, and the unblushing covetousness of hard landlords.

I think I am correct in stating that in St. Giles's parish about 3,000 families have only one room each, and in Holborn, out of a population of 44,802, about 8,000 families are in single rooms.

But I shall be told that there are in existence powers to mitigate, if not remove, these evils. The existence of a power is one thing; its righteous exercise is another.

Local government is in many respects excellent, but in this case it has been a very considerable failure. It is not in the nature of things (looking at human nature as it is) that it could be otherwise.

Vestries are human, and partake, some would say, largely of the infirmities of human nature, from whatever atoms they may have been originally formed. Take a case.

There is A, a hard, grasping landlord, the proprietor of five or six old, tottering houses, each built for one family, but containing six or seven, at rents varying from 3*s.* 6*d.* to 6*s.* a room. Are B and C, his neighbours and friends, sitting in the seat of local authority, to condemn his houses, or compel him to lay out money on his property? No. But there is a solution of the difficulty, for which, however, even the most speculative cannot venture to wait—I mean when the houses come down of their own accord, as two houses in my own parish did last month. And would it be credited that a landlady, not a hundred miles from the spot, came out into the street and, amid the ruins of fallen houses, demanded the rent from

the hard hands of the flying tenants, who were evidently considered to have been well treated by being permitted to carry away their lives and the clothes on their backs. Thanks to a kind Providence, the houses fell at eleven o'clock in the day, instead of at night; otherwise fourteen families might have been buried alive!

In happy contrast to this I would draw attention to the interesting statement of Mr. E. W. Watkin, a member of the last Parliament, who, in a recent letter, writes as follows:—

'But in the country, neither model lodging-houses nor railways have grappled, or can really grapple effectually, with the evil. They may to a large extent mitigate, but they cannot cure it. We want, as it seems to me, a general effort on the part of all employers of labour, and especially corporate employers, whose life as such, and whose employment is continuous; and evidently we require a stringent action by the State to do that which unfortunately the State only can do. Again, that action must be so directed as not to blunt the spirit of self-dependence. As regards what the employer can do if he will, I may mention two or three cases in point. In establishing the fishing trade at Grimsby, I found the greatest difficulty in inducing fishermen to migrate to a new port, although it was surrounded with appliances which did not then exist in any other port in the kingdom; and, in 1860, I arranged to give a prize for the best designs for separate houses, suited to the means of persons earning 20*s.*, 25*s.*, and 30*s.* a week; and an excellent series of plans having been adopted, a large number of these houses were built on a healthy site, and offered at rents which would yield about 4 per cent. on the outlay. Gradually, one at a time at first, and then with a rush, the houses were taken up by the fishermen from various parts of England; and the colony thus called together became the seed of a fishing trade, which, starting fifteen years ago at *nil*, now lands 40,000 tons of fish in a year, and is rapidly increasing, supported by as sober and God-fearing a class of men and women as any in the world. Again, when the late Duke of Newcastle, in 1857-61, sank his deep coal pit at Shireoaks, far away from any colliery enterprise, he was wise enough to build very superior houses, and to let them at a low rent, and the houses drew a population almost by magic.'

The proprietors of the Kiveton Park Collieries, on the Duke of Leeds' estate, have done the same, adding good playgrounds, and they have had in consequence no difficulty in finding labour in a place somewhat apart from mining operations. In fact, a good house makes the dwellers in it 'house

proud,' and it is charming to see how clean, tidy, and cheerful the houses are, and the men, women, and children in consequence.

Now, here are cases where a good house for work-people has greatly benefited the employer.

But it is clear that employers, however munificent, cannot alone deal with this great question.

We must have compulsory powers to deal with the powerful and well-compacted phalanx of grasping landlords or their more grasping middlemen.

We must have Government aid to come to the help of 'the weak against the mighty.' We must not be left to the tender mercies of vestries, however able and active, or to local inspectors, however attentive to their duty.

We must have an authority high above all party, local or otherwise, superior to all jobbery. We must have powers, at least in all the large towns of Great Britain and Ireland, analogous to that which has been called into action in the city of Glasgow, in Edinburgh, and at Dundee. It has been my great pleasure and privilege to see the results of the 'Improvement Act of 1866' in this great city (Glasgow); never before had I been made to feel how much man was in one sense formed or reformed from matter, or how much the moral seemed to spring from and be dependent on the material.

The fearless and persevering efforts of the Trusts Committee, composed as it was and is of heroic gentlemen, actuated by a high sense of public duty, have in a decade done the work of a century; and never was the besom of destruction more advantageously handled than in sweeping away those styes, and dens, and rookeries, that once stood side by side with the learning, the intelligence, the commerce, and the Christianity of the second city of the Empire.

I have spoken of our great difficulty from without; let me allude to one from within—I mean the aversion of a large number of our poor themselves to any improvement in their dwellings. Long habituated to foul atmosphere and filthy rooms, many have acquired a second nature, and shrink from being disturbed by philanthropy from the dreams of the sluggard's paradise.

The case is well put by Dr. Whitmore, the Medical Officer of Health in Marylebone. He says:—

'Amongst the poor and destitute inhabitants of this parish there are many who are grossly ignorant, very dissipated in their habits, and utterly regardless of anything like decency or order in their dwellings. With these people all efforts to

improve their sanitary condition are unavailing, and will continue to be so until, by some means yet to be discovered, they are lifted sufficiently high in the social scale to discern and appreciate the advantages of personal cleanliness and comfortable homes. But after all, it must be admitted that the one great obstacle to the sanitary improvement of our destitute poor, for which even the most reckless and dissolute amongst them are not altogether responsible, is the structurally defective condition of the dwellings in which they are compelled to live.'

We may hope that education and an improved public opinion among their own order may gradually cure them of what I will venture to call a peculiar form of hydrophobia, but the difficulty must not be ignored.

Before concluding, there are four points on which I would venture to claim special attention in providing dwellings:—

1. Let them be as convenient or (to use their own expressive term) as 'handy' as possible to their work.

2. Let them not be too much congregated into one faubourg or quarter, objectionable alike on social and political grounds.

3. Let there be, if possible in the buildings, or hard by, a good wash-house, and a *crèche* or 'infant nursery,' in which to tend and guard the infants during the parents' absence at work, and thus enable the elder children to go to school.

4. Let there be, if it can at all be secured, a playground or vacant space where the children can play without the probability of being run over by a butcher's cart, or contaminated by the lowest company of the streets.

As bearing on these and other points to which I have alluded, I would quote the very valuable opinion of my friend, Mr. Robert Vigers, the surveyor of the Peabody Trust Buildings—

'1. A family never having had a clean and well ventilated home cannot at once form a notion that it is an advantage to get one; but those who have been taken from dirt and put into the new home, in a short time begin to see the benefit, and it is shown (so soon as they have found out the way to use its benefits) that they begin a better life.

'2. It is impossible to fill any of the large, new buildings and not find some good people; the effect upon others is, that there is great moral improvement. A woman cannot live in vice upon the same floor, or even in the same building, with good women (even if the superintendent does not discover her); so that to stay in the building she must mend her ways.

'3. Moderate rent to men with small pay is a great benefit,

and must be considered a means of helping those who desire to benefit their children, and cannot be considered charity.

'4. The Peabody Trustees find it is of the greatest importance the men should be near to their work. It is, therefore, the practice to erect buildings as near to the central parts of London as possible.

'5. We want, and must have, in my opinion, philanthropy to help one class, and commercial enterprise will help the well-to-do workmen into a better class of house; both classes (philanthropists and commercial men) want proper powers to enable them to clear sites by the removal of buildings quite unfit for residences, and then it will be a work of time.'

It is quite clear that in the matter of the dwellings of the poor the grinding landlords and the ignorant tenants have had too much liberty, whether looked at from the standpoint of the statesman, the patriot, or the Christian; and in this difficulty we shall find that that which is so eloquently described by an inspired apostle as 'the perfect law of liberty,' and which is the groundwork of all true civilisation, is the best guide, both for rulers and people, to a right judgment in this great and good work in which 'mercy and truth meet together.'

Sincerely do I sympathise in a remark made by an able writer on this subject—'Would that social philosophy could bring the same amount of devotion and energy to check the causes of distress which benevolence brings to the relief of individual suffering. It has been wisely and wittily said, that while charity created the distress it relieved, it could not always relieve the distress it created. Far nobler and more practical than the sympathy which is only awakened by present and visible suffering—and when it has given temporal relief dismisses the painful object—is that philanthropy which abolishes the pernicious agencies that depress the moral and physical welfare of the working classes, removes their temptations to evil, helps them to healthy, comfortable homes, and gives the means of physical and intellectual enjoyment.'

On our ability to supply the conditions of civilised existence to the neglected masses of our large towns rests the possibility of raising them from their present unsatisfactory state.

DISCUSSION.

Mr. Edwin Chadwick, C.B. (London), proposed that the thanks of the Health Department of the Association should be given to the Glasgow Corporation for the important example they had set in sani-

tation for the benefit of other cities, by the proceedings they had taken for the removal of irretrievably unhealthy dwellings and the reconstruction of healthy ones for the wage classes of the population. It was on the point of economy that this question would be finally judged, and the example set by Glasgow is one the issue of which ought to be closely watched by London, Liverpool, Manchester, and other large towns. He remembered, when in Glasgow in 1860, that he went to visit some of the wynds, and got into conversation with a workman, who seemed to be a resident. He told him that his wages were 21*s*. per week, and confessed that 10*s*. a week of that sum was spent in drink. He ventured to expostulate with him on the very large proportion of his earnings which were spent in drink, and he remembered very well the reply he received—'If you lived here, I undertake to say you would drink, too;' and the man was quite right, for the first thing he did when he got away from the neighbourhood was to call for a glass of brandy. He himself had an important experiment to relate on this question. In a place which he visited from time to time, and took an interest in its district schools, calling after long intervals, he was struck on one of his visits at the change of type of the children, so much so that he had said, 'You must have a new class of children,' so different did they appear. 'No,' was the answer; 'but since sanitary measures have been adopted, the type of children has been improving.' He had paid great attention to this subject, for it showed what could be accomplished towards promoting the growth of a better character of children, making them more tractable. He would only refer to one point, and that an economical one, in respect to construction; and first he would say he was glad that they were depending upon commercial interest rather than on philanthropy. Damp walls were a source of many evils, and according to the practice of construction at present adopted in building in and about London, even the best class of houses were so constructed that they were not safe for habitation for from nine to twelve months after their completion. It would be a great point to get rid of that, and he ventured to suggest the use of hollow bricks. A subject of the largest importance was the use of concrete instead of brick, its cost being only about one-half that of brick, while it only possessed one-fourth the absorbent power. The effect of these improvements would be, he thought, to take the construction of houses out of the philanthropic and place it on the commercial principle. The Peabody dwellings, for instance, only now returned an interest of 3 per cent.; but with this new and improved mode of construction they would pay 5 per cent., and be placed on a proper commercial principle. It had been found that people disliked the discomfort entailed by large space in a room, and that difficulty would have to be met by warming them more effectually. They had given a prize for the best warming apparatus, and specimens were now to be seen which he believed would not consume more than half the fuel of the ordinary fire-grate and be warmer. It had been conclusively shown by the experience of London that dwellings could be constructed on such good sanitary principles that the death-rate in them was not more than 14 or 15 per 1,000, and with a

reduced cost of one-half in construction, he hoped the results for which they were all striving would soon be obtained.

Mr. THOMAS WEBSTER, Q.C., F.R.S. (London), seconded the motion. He thought nothing could be added to the paper of Mr. Simpson, which described what he knew to be one of the foulest spots of the metropolis, and it was surprising that such places could exist. He looked with great satisfaction on the example which Glasgow had set to London and other large towns, for it had shown that by proper economic arrangements it was possible to make such changes profitable. He gathered from the first paper that they had been by no means unsuccessful in their speculation, and had they been allowed to buy more at first they might have made it a profitable one. He looked on the new standing orders introduced by Mr. Cross with respect to the destruction of the dwellings of the poor by railway companies as the commencement of a new era, as it had brought the destruction of whole neighbourhoods under the domain of philanthropic views, and would in the end make a great change for good. He desired to see attached to the working man's dwelling-houses, in addition to a playground and wash-house, a working man's club and eating-house; and he thought the question of how they could best be provided was well worthy of being brought before them.

Dr. W. T. GAIRDNER (Glasgow) said his experience as the medical officer of health for nearly ten years gave him a large local knowledge of the state of Glasgow, both as to its former as well as its present condition, and in addressing the department he would have the advantage of being able to speak without the responsibility attaching to a present official position. He thought there could be no doubt on the question of the wisdom or value of the Improvement Act, which had dealt with measures for which there was no other remedy. As medical officer of health he found that he had not only to combat against present neglect, but against a long inheritance of evils derived from the past, for which there was no other remedy than the Improvement Act. Not only was the death-rate increasing from year to year, but all the sanitary officers who had to do with the subject were impressed with the feeling that they were merely, as it were, scratching at the surface of a sore, and that destruction was the only condition of health. It was not only that people were overcrowded in rooms, but they were so overcrowded on the ground that all the natural means of health, air, recreation, and physical cleanliness were made literally impossible by the structure of the buildings. This was the case to a very much larger extent in Scotland than anyone accustomed only to English towns could have the least conception of. He thought that state of matters was to a great extent attributable to the habit of building tenements of houses so large that it was impossible to keep them clean and healthy, and they were unfortunately so strong that they never would tumble down. He noticed that upon the special question for their consideration they had heard very little, but he was perfectly satisfied, and the conviction grew stronger upon him the more he saw of the subject that the function of the authorities was mainly to destroy, and to leave the task of re-erection to private enterprise. It was quite clear, however, that

destruction must precede reconstruction, because, as people were making their way in the world and removing to better descriptions of houses, there were always a large number of new-comers from the country ready to occupy their place, and who were prepared to squat down in any kind of building. The dens must be destroyed, or there was no hope of any better state of things. He was anxious to say this, because he knew destruction had been getting a bad name lately. He sincerely believed that the population which inhabited the wynds in Glasgow would be better for being displaced. The question before these poor people was either mend or end, and the return of Captain McCall showed most unequivocally that the criminal body diminished after the destruction of the dens of crime. He said destroy the dens; the inhabitants will either mend or end, and it would generally be found that they adopted the former alternative.

The resolution was then put to the meeting by the Lord-Provost, and carried unanimously.

Dr. Shrimpton (London) agreed with Dr. Gairdner that the real question for discussion had hardly been touched by the previous speakers. He thought some facts connected with buildings for working men would be found very pertinent to the question. The Shaftesbury estate had a population of 5,000, and would very soon number 8,000, and the effects on the moral and physical condition of these people produced by the new buildings were very remarkable. The committee had abundance of choice in their tenants, and none but those who were of good moral character were accepted. The consequence was, these people were known to be good, moral people, and, though not known to each other, they required no discipline. They all went to church, and were a practically religious people. Order, cleanliness, and frugality prevailed everywhere. They were proud of their homes, and the public-house had no longer any inducement for them; in fact, the inhabitants would not have a public-house or a pawnbroker's shop on the estate. The streets were about forty feet wide, the pavement on each side being bordered with trees. The houses were of four different classes, and in all of them good ventilation and water were secured, and also a washhouse. The drainage is on the very best principle, the sewage being carried to the back part of the premises without going through the houses. There was a small garden in front of each house and a large one behind. The prosperity of such projects as these was secured by the fact that they were a commercial success. At Salford, when fever raged on all sides, not one case came to the dwellings built on the principle of the Shaftesbury Park Estate. The profits realised 7½ per cent. to the shareholders, and not a hundred pounds had been required for repairs during three years. The principal element in considering the question of working men's dwellings in regard to hygiene was to secure good ventilation.

Mr. Baldwin Latham, C.E. (London), admitted that the real question had not been much touched upon in the discussion. He thought it was a very difficult matter for a municipal authority to undertake the expenditure of public money in rebuilding. It very often became necessary to clear away large numbers of dwellings for

purposes of sanitary improvement, and the question was, how new dwellings were to be supplied in place of them. It would only be when the country was thoroughly educated as to the necessity for healthy homes for the whole population that they could be expected to make any advance in the direction of a proper supply. There were many points which had arisen which would be of interest to them in the south, but it was very important to know what measures had been adopted to secure a better class of house in place of those which had been destroyed, for it was quite clear that, if some special measures were not adopted, the new buildings might become as unhealthy as those they were intended to supersede. In England they found great difficulty in carrying out the sanitary laws, in consequence of the influence which speculative builders exercised over municipal elections, and therefore their power of imposing on the corporation bye-laws, which did not at all promote the health of the district; and even when bye-laws were enforced, every kind of device was resorted to in order to evade them. He was convinced that some more stringent Act must, before long, be carried through Parliament. A difficulty in the working out of this subject would be found in places where the whole sanitary area was now built upon, and where, therefore, it was impossible to find ground to build houses to replace those which might be pulled down on sanitary grounds. He thought, however, that the difficulty could be best got over by enlarging the present area of sanitary districts. Of this he felt sure, that one of the first bye-laws which ought to be enforced was that abundant space should be left around and about every building erected.

Mr. William Botley (London) thought it had been very conclusively shown by previous speakers that it was of no use to go much further in the direction of rebuilding improved artisan and labourers' dwellings unless it could be proved that such speculations would be made commercially profitable. He found there was a great want of improved dwellings in agricultural places as well as in large towns, and that, where good cottages were built on farms, they were a source of profit. A farm of 500 acres with which he was acquainted had increased 37*l.* 10*s.* in rental since good cottages had been built upon it, and this gave 6 per cent. on the outlay, and it was found that the labourers who inhabited the cottages ceased to frequent the public-house, and their children were the best educated of any he had met with. The loss of labour involved by not having labourers' cottages at a convenient distance from their work was enormous.

Mr. Thomas Binnie (Glasgow) said he had had some experience in the erection of houses for the working classes as a commercial speculation, and probably, to the strangers present, it would not be uninteresting to know the rate at which they could be erected in Glasgow. He found that houses would pay if let at the rent of 6*d.* per square foot. In that was included the common stair. Calculated upon the actual space within the door, the cost would be 7½*d.* per square foot. If they assumed that a working man and his family could expend on rent 12*l.* per year—a liberal assumption, he thought—the space they could afford to pay for would be 384 square feet. Taking the ceiling

at ten feet high, the cubic space would be 3,840 feet. He thought that to take six persons to each house would be a moderate estimate, and that would allow a space within the walls of 640 cubic feet to each person, a quantity quite insufficient, in his opinion, unless ventilation was very well attended to. In Glasgow they were inflicted by an unfortunate domestic arrangement—they must have a concealed bed, which consisted of a closet six feet long by four feet wide, the only opening into which was a small door. He had built houses without this contrivance himself, but he found they would not let, people complaining that there was no room. He considered that it was necessary to legislate in order to prohibit such pestilential plague spots. With regard to the cottage system, he admitted that they might be a great success at Shaftesbury Park, being very good for the people who inhabited them; but it was to be remembered that the occupiers of the houses there were not the real working classes, but generally clerks, or of a superior grade in society to the working men. If they erected houses on the cottage system in Glasgow, the ground-rent would probably be in the proportion of 25 per cent. of the gross rental, and if it was to be a paying speculation, they would require to reduce the amount of accommodation they gave to the people or increase the rent. Now, as they could not increase the rent, it being a certain proportion of the working men's wages, they must endeavour to get the cheapest construction and the largest space; but it must be remembered that it was absolutely necessary, on account of the more severe and moist climate, to build houses more substantial in character than they were accustomed to do in England.

The Lord Provost of Glasgow (Sir James Watson) was delighted to notice that the attendance in the section was such as to show that a vast interest was taken in the subject. He thought Baillie Morrison had clearly shown in his paper, and had been confirmed by Dr. Gairdner, that it was only by the destruction of the old houses that they could obtain the object they had in view. These houses could not be cobbled up; as John Knox had said, 'Pull down the nests and the rooks will fly away.' Their experience in Glasgow led to the conclusion that the rebuilding might safely be left to private speculation, for they had three times the amount required to replace that which had been pulled down. He might notice that Glasgow was indebted to the Social Science Congress of 1860 for the Improvement Act. It was that Congress which had given the authorities the stimulus to apply for and carry out the Act. It passed almost without any opposition, and it was not until the tax to carry it out was imposed that any difficulty arose. The people didn't like the idea of paying 6*d.* in the pound in order to carry it out, and much murmuring arose in consequence. He, however, thought it was wise economy to spend 6*d.* in the pound to improve the dwellings of the working classes. The Corporation had met with difficulty in keeping the people patient during the time required for beginning the improvements, for they had, he thought, very wisely determined to secure all the property before beginning operations. They knew very well that, if they didn't do so, the property which they had not secured would very soon have risen considerably

in price. But all kinds of influences were brought to bear upon them in order to get them to begin before they had secured all the property upon which they intended to operate. With regard to ventilation, everything possible had been done, and as to drainage, they had done very much for the old houses before the demolition took place. They found considerable difficulty, owing to the indisposition of the inhabitants to change their dwellings, He recollected going into a close in the Salt Market which was in a very deplorable state, where he entered into conversation with an old woman, who told him that she had lived there for fifteen years, and did not wish on any account to leave the house. In purchasing property they never made use of their compulsory powers, but endeavoured to come to terms with each owner, and they found it was the best course to adopt. If the owner held out for an exorbitant price, they simply postponed the purchase, or said we will let it alone. They had all heard from Baillie Morrison the happy results which had followed in the detection of crime. He might add that the number of cases of fever had been reduced from 333 to 52, and the total death-rate had decreased, though not yet to the extent which they might wish. It was not, however, to be expected that the full effects of their labours would be visible. It would take at least two or three years before that would be fully shown in the decreased rate of mortality, but they had every reason to be satisfied.

The PRESIDENT of the Department said the admirable paper of Baillie Morrison had shown how entirely necessary it was for the Corporation of Glasgow to proceed as they had done in carrying out the total destruction of the property. He believed that in course of time property of that kind became perfectly saturated with the germs of disease, and it was quite impossible to get rid of them. They sometimes found hospitals from the same cause get into such a condition that it became necessary to abandon them. He believed that these disease germs might be dormant for a very long time, hundreds or even thousands of years, and start again into activity when circumstances favourable to them arose. There were instances where, in old places, buildings were pulled down, and disease thereby produced. He remembered, while visiting Rome years ago, he inspected some excavations that were taking place, and had an attack of fever immediately after, and when it was considered that the present city of Rome stands on the ruins of old Rome there was sufficient to account for the prevalence of the well-known fever there. There was another instance in Toulon, where for the last two or three years they have been rooking out the fortification, and where fever has been during the time permanent, and has not yet been got rid of. It was the same also in Jerusalem. He thought that Baillie Morrison's paper had shown that in replacing the old houses by others built with due attention to hygienic conditions, with good ventilation and good sanitary principles, they had not only improved the physical condition, but had effected wonderful results in the moral atmosphere of the place. There was nothing more important than to have good sources of air, and he noticed that in letting in free air to these dwellings they had at first enabled crime and criminals to escape, but by adopting a grating they secured all the advantages of air, as well as

cured the evil of making these open spaces a means for the escape of criminals. In course of time no criminal would think of resorting to such places as a means of escaping from justice. He had scarcely bounds for his admiration of the energy which the Corporation had displayed. The results of the work were coming rapidly, and no tax would in the end be found so productive and so economical as that which was necessary, by the large expenditure incurred by the Corporation, to root out the evils, and by destruction produce construction, which was answering the purpose admirably in the improved class of dwellings for the poor which were being provided.

Mr. W. R. Smith (Glasgow) said that the present movement was only a half measure. He only wished they could go out and see the buildings which were being put up in Glasgow for the working classes, and he feared they would come to the conclusion that the Improvement Act did not produce very much improvement after all. If they were to have good houses built in lieu of bad ones, it was necessary that they should get Parliament to give municipalities more power over the surrounding land, with power to say in what manner it should be built upon, so as to secure good sanitary conditions; where there was a large prosperous mercantile class they would find the means of getting the dwellings they required, but it was not so with the lower working class. About thirty years ago he had occasion to enter into the question of building good houses for the working classes. He was looked upon as mad when his plan of building was understood, but he persevered and it proved very successful. He remembered a large owner of houses expostulating with him afterwards on the subject, when he replied that the houses were all let to very good tenants, when the gentleman replied that was just his point of objection, for he was drawing away from him his very best tenants. He repeated that the only course they could follow in reference to how they should get healthy working men's dwellings was to awaken Parliament to the fact that mankind must have room enough to breathe, 'live, move, and have their being.'

Mr. P. H. Holland (London) said he found no fault with the course the discussion had taken, but he thought the question on what way can healthy working men's dwellings be erected had been very little referred to. Baillie Morrison had certainly told them a way, namely, by pulling down the bad ones, but the great question was, did it pay? There was no doubt that in a certain sense it had done so in Glasgow, but it had cost 40,000*l.*, and the payment, he thought, had been rather indirect than direct. He felt that this process of improvement could only be carried out by paying for it, and he thought we should restrain by law the letting of bad houses, because they entered into unfair competition with good ones. There were numbers of persons who would prefer to occupy any kind of hovel in preference to a healthy dwelling, for the sake of saving a little money. Until a restraint was put on them, and not until then, would they be able to get good houses for everybody. He saw no hardship in doing this, for what could be more dear to any one than to live in a house which was not fit to live in. It was giving a premium to them to risk their lives. The sooner a state of law was made to prevent people from building houses unfit to live in, the better

it would be for every class of society. Then would the capitalist get a fair return for fair accommodation, and the working classes would be provided with proper houses.

Mr. William Hope, V.C. (London), said this was the second time he had enjoyed the hospitality of the people of Glasgow in connection with the Association, and he was afraid he would be making a very poor return for all their kindness, but he felt compelled to notice that houses constructed with no regard to the laws of hygiene were not confined to the working classes. In one house in which he had been lodged sumptuously, where he was provided with a magnificently furnished bedroom, he found three large plate-glass windows through which not a breath of air could penetrate into the room. In another part of the room was a fixed wash basin connected directly with the sewer, and he was quite certain without any proper ventilation. The day previous he had luncheoned in one of the principal houses in the city, and the lady of the house, a most handsome and attractive person, complained that she was suffering from severe headache, and was compelled to retire to her room. He could not help thinking that the remedy would only aggravate the complaint, and that an open window would do far more for her than a bedroom such as he had just described.

Mr. A. M. Fowler, C.E. (Salford), said they found in Leeds that street improvements did not increase the rates, because by widening the streets they obtained an improved class of property, and built houses of a better class. He himself knew of instances where land which was worth not more than 5*s*. per square yard before the improvements took place was after this completion worth 40*s*. per yard.

Health of American Cities. By Elisha Harris, M.D., Secretary of the American Public Health Association, and Registrar of Vital Statistics, New York.

THAT 'the great cities of the world are becoming greater' seems to be as true of the present as of the ancient period, which history will for ever designate as that of the higher civilisation. In the present, as in the past, the practical applications of the sanitary and the social science of the period have the greatest demands and most conspicuous opportunities. If they accumulate the wealth, luxuries, and conveniences of the highest civilisation, so likewise do they gather in dense and dangerous masses certain physical and social elements of peril to the people. But the centralisation of governmental supervision under municipal authority counterbalances much of the evil and danger to life, if not to social welfare, in large and well-policed cities.

The great cities of the United States are indeed growing greater in the same manner as the cities of Europe are growing greater. But there are few already great cities in America, and these, considered with reference to the number of certain large

classes of inhabitants in them, are already greater than the necessities of commerce and the best interests of civilisation require. Foreign immigration and the fortuitous movements of vast numbers of individuals and families in pursuit of fortune and happiness, which the American cities are supposed to offer, give to these cities populations which are less favourably conditioned for sanitary security and domestic permanency than are populations of the chief cities of Europe.

The last national census found $21\frac{8}{10}$ per cent. of the total population in the United States residing in cities and populous villages. Fifty of the cities contained 5,784,778 inhabitants, and in the 311 cities and large towns which had at that time municipal modes of local government there dwelt 8,452,315. Within the same municipalities there dwell at the present time nearly 9,500,000, for the mean rate of increase of population in these cities is not less than 2·5 per cent. yearly. The census in 1870 found 21·91 per cent. of the total population of the nation dwelling in these fifty cities.

The vast number of the cities, and the eager strife of all to vie with each other in offering enticements to trade and immigration, impart peculiar characteristics to the great masses of the city populations in America. A far less proportion of the inhabitants in most of these cities becomes permanently settled and acquires the ownership of a dwelling-place than in other countries. Philadelphia and Baltimore among the large cities, and the interior municipalities of the smaller kind, offer the chief exceptions to this remark.

The restless spirit of enterprise and new effort which is characteristic of the American people, and which extends largely to the mass of the foreign-born inhabitants in these cities, produces beneficial physical and social results, which in some degree affect favourably the public health, and it is safe to conclude that if the American cities suffer great disadvantages from the presence of a vast percentage of unfixed and of foreign or unnaturalised and unacclimated inhabitants, still the advantages of thrifty incitements, which push on these classes of people to new efforts and new homes, yield results that in some measure counterbalance the evils here mentioned.

Let the fact here be noticed that the speculation and hopeful enterprise which have founded and populated a great number of the cities and large towns in the United States have given neither form nor efficiency to the local or sanitary regulation and government of the municipality. These matters have regulated themselves under general laws of the State and under the elected Board of Aldermen and commonalty, to which the State has committed by special statutes a limited power of municipal

legislation, expenditure, and police authority. No laws have interfered with the founding and laying out of towns, and if in some of the oldest cities the streets and general plot of the primitive districts conformed to the cow-paths and bridle-roads of early days, the general development of American cities has been upon a scale of generous breadth of area and of thoroughfares.

Though the sites of cities and towns have in few instances, except in that which William Penn selected, been chosen for the physical and social advantages the locality would afford to the coming generation, yet rarely do the topographical peculiarities of the site and district offer insurmountable barriers to the problems of sanitary engineering. This is true,—from the site of the City of New Orleans, which is protected by levees from the overflow of the Mississippi River, whose surface is as much higher above the horizontal plane of the streets as the Thames at high-tide is higher than the Plumstead marshes,—up the rivers two thousand miles, to the mountain-site of the City of Denver, at an altitude of 5,350 feet. The spirit of speculation has usually laid out broader thoroughfares and more extended plots of unbuilt streets than self-interest and economy would have deliberately mapped out.

Thus the new cities of the United States, and the annexed or extended additions to the older cities, have offered from the first some advantages to the sanitary provisions which these cities require as they are growing up into densely peopled municipalities; especially is this true as respects the broad extent of the area within municipal limits, the width of avenues and streets, and the appropriation of numerous plots of public grounds for parks, of limited but prospectively useful extent.

No city in the world has excelled Philadelphia in the development of an original plan of heathful and commodious extension, for the ideal city of William Penn at last realizes the advantages which its founder sought to insure for its future. It has, by principles of natural extension, so accommodated its growth to the wholesome preferences of a thrifty population, that its 750,000 inhabitants at present are well distributed over an area of 122 square miles. It is literally a metropolis of families and homes.

Even the cities of New York and Boston, which seemed in the past two hundred years to be bound to increase solely by condensation rather than by extension, so narrow and insular are their primitive limits between the tide waters that nearly surround them, and with harbour facilities that make them centres of commerce, have at last projected outward their new inland periphery, and more than doubled the dwelling area for their inhabitants. Strongly as free people may cling to local poli-

tical organisations, the reading and thinking classes govern, for they create and control the popular sentiment and shape the public will.

The rapid and extravagant extension of the railway system in the United States has induced a profuse, yet not wholly unwise, spirit of rivalry and studious effort in the development of municipal improvements adapted to secure the influx and permanent settlement of the wealthy and cultivated classes. This has been strikingly illustrated for a few years past in the prompt and enthusiastic efforts of city and even village governments to introduce ample supplies of pure water, regardless of mere present cost, interior cities with from 30,000 to 150,000 inhabitants unhesitatingly expending millions of dollars to secure the best water supply, and securing it, too, by methods that insure a constant high-pressure to all dwellings. It has been shown to the public satisfaction that the bonding (by pledging the credit) of towns and cities for public water supplies does not produce any degree of bondage of the people.

These points are mentioned *in limine* as applying more and more extensively in the cities and large towns of the United States, greatly to the advantage of public hygiene. Yet it is not to be overlooked that while the spirit of enterprise, emulation, and profuse expenditure of public funds has secured such advantages as these, it is only quite recently that expert sanitary observers and engineers have been sought for to conduct or give advice concerning the works of public improvement. But we now point to the hopeful fact that they are largely consulted, and in some degree are in charge.

Having presented this preliminary view of the condition of sanitary works in the United States, the following statements will follow:—

1. A statistical schedule of the cities and chief towns.

2. An epitome of facts concerning the sanitary topography of these cities, &c., considered in geographical districts.

3. Endemic and epidemic memoranda concerning these districts, as shown in the sanitary history of the cities and chief towns.

4. Notes upon the sanitary topography, the present sanitary condition, and the health government of each city.

5. Notes upon the excessive death-rate in young children, and upon the death-rate and the expectation of human life in the city populations at ages over five years.

6. Sanitary state of the foreign and the native-born classes of city populations, and some suggestions for the hygienic welfare of the foreign-born and industrial classes that migrate to American cities.

Statistical Schedule of Cities in the United States.

City and State	Total Population Census of 1870	Estimated Population, December 31, 1873	Total Deaths in the Year 1873	Deaths under 5 Years of Age in 1873	Area of the City in Square Miles	Highest Altitude above Sea Level*	Lowest Altitude above Sea Level*	Average Altitude above Sea Level	Source of Water Supply	Mode of Water Supply
New York, N.Y.	942,292	1,040,000	29,084	...	...	150	0	35	... ...	... ...
Philadelphia, Penn.	674,022	775,000	15,224	6,260	122	440.6	0	35	Schuylkill River	Pumps and Reservoir
Brooklyn, N.Y.	396,099	435,314	10,968	5,539	22	150	0	40	Streamlets from south side of Long Island	Force and Reservoir
Saint Louis, Mo.	310,864	440,000	8,551	4,014	...	...	...	475	Mississipi River	Reservoirs
Chicago, Ill.	298,977	400,000	9,557	5,676	35	616	587	585	Lake Michigan	Force
Baltimore, Md.	267,354	305,000	7,614	2,301	14½	233	0	60	Rivers	Reservoirs
Boston, Mass.	250,526	276,500	7,869	3,289	16½	244	0	40	Chocituate Lake and Sudbury River	Reservoirs
Cincinnati, O.	216,239	246,923	5,641	2,511	24	...	...	575	Ohio River	Force and Reservoirs
New Orleans, La.	191,418	200,000	7,505	2,562	18	17	3	10	Rain, Cisterns, and Rivers	Pumps
San Francisco, Cal.	149,473	192,000	4,002	1,460	45	...	0	50	Mountain Streams, distant 15 miles	Reservoirs
Buffalo, N.Y.	117,714	170,000	2,336	1.016	37½	687	565	580	Niagara River	Holly System
Washington D.C.	109,199	140,000	...	...	...	101	1	45	Potomac River	Reservoirs
Newark, N.J.	105,059	125,000	3,735	1,891	18	213	0	30	Passaic River	Reservoirs
Louisville, Ky.	100,753	...	...	...	...	...	...	450	... ...	... ...
Cleveland, O.	92,829	137,000	2,641	1,431	31	732	568	625	Lake Erie	Station 1¾ m. from shore
Pittsburg, Penn.	86,076	133,000	3,519	1,781	23	1,312	740	800	Rivers	Reservoirs
Jersey City, N.J.	82,546	111,000	...	...	...	180	0	30	River	... ...
Detroit, Mich.	79,577	100,000	2,506	1,181	15	...	...	580	Detroit River	Force and Reservoir
Milwaukee, Wis.	71,440	100,000	2,026	1,195	21	...	...	620	Lake Michigan	Water Works

Albany, N.Y.	69,422	95,000	1,786	...	...	...	...	85	Ponds and Streams	Gravitation
Providence, R.I.	68,904	99,608	1,719	631	15	200	0	60	River and Wells	Force
Rochester, N.Y.	62,386	...	...	...	...	...	...	506	... ...	... ...
Allegheny City, Penn.	53,180	60,000	1,277	772	...	...	...	760	Allegheny River	Gravitation
Richmond, Va.	51,038	60,000	2,037	889	5	186	7½	50	James River, Private Cos., and Wells	Pumps and Reservoirs
New Haven, Conn.	50,840	60,000	1,277	580	...	140	4	40	... ...	... ...
Charleston, S.C.	48,956	50,000	1,516	545	...	19	6	8	Cisterns	... ...
Indianapolis, Ind.	48,244	...	...	...	...	726	661	680	... ...	... ...
Troy, N.Y.	46,465	...	...	...	...	350	125	40	... ...	... ...
Syracuse, N.Y.	43,051	...	...	...	...	...	...	425	... ...	... ...
Worcester, Mass.	41,105	48,000	1,049	422	34	748	472	480	Lynde Brook	Reservoirs
Lowell, Mass.	40,928	50,000	1,162	483	8	280	42	80	Merrimack River	Gravitation through Filter Beds
Memphis, Tenn.	40,226	...	...	...	...	...	...	260	... ...	... ...
Cambridge, Mass.	39,634	45,000	970	419	5	87	10	20	Force from Fresh Pond	Force
Hartford, Conn.	37,180	40,000	773	...	6½	110	4	30	Mountain Streams	Gravitation
Scranton, Penn.	35,092	...	...	...	...	...	...	740	... ...	... ...
Reading, Penn.	33,930	38,000	800	...	5	...	...	260	Mountain Streams	Gravitation
Paterson, N.J.	33,579	38,000	877	433	8⅓	213	0	280	Passaic River	Water Works
Kansas City, Mo.	32,260	...	...	...	...	...	...	700	... ...	... ...
Mobile, Ala.	32,034	40,000	1,169	365	10	...	...	20	... ...	... ...
Toledo, O.	31,584	45,000	569	277	12	...	...	600	River	Water Works
Portland, Me.	31,413	32,000	691	229	...	175	...	80	Lake Sepago, 16 m. distant	Gravitation
Columbus, O.	31,274	...	...	...	...	...	...	700	... ...	... ...
Wilmington, Del.	30,841	...	...	...	...	110	1	30	... ...	... ...
San Antonio, Tex.	12,256	16,000	323	100	36	...	...	600	Springs (a River 2 m. dist.).	Gravitation
Dayton, O.	30,473	35,000	583	206	8	720	...	750	Mab River	Holly System
Lawrence, Mass	28,921	...	...	...	...	...	...	70	... ...	... ...
Utica, N.Y.	28,804	...	...	...	...	...	...	450	... ...	... ...

* The highest and lowest altitudes are thus given for the purpose of indicating the topographical peculiarities of the cities. We are indebted to Dr. JOSEPH M. TONER, of Washington, D.C., for permission to refer to his manuscript records of altitudes.

Statistical Schedule of Cities in the United States.—Continued.

City and State	Total Population Census of 1870	Estimated Population, December 31, 1873	Total Deaths in the Year 1873	Deaths under 5 Years of Age in 1873	Area of the City in Square Miles	Highest Altitude above Sea Level	Lowest Altitude above Sea Level	Average Altitude above Sea Level	Source of Water Supply	Mode of Water Supply
Charlestown, Mass. (annexed to Boston, 1874)	28,323	30,000	794	1	1	...	...	30	Mystic Lake, 4 m. distant	Reservoir
Savannah, Ga.	28,235	30,000	1,290	...	...	...	...	20	Savannah River	Force
Lynn, Mass.	28,233	30,000	642	115	13	...	...	100	Ponds	Artificial
Fall River, Mass.	26,766	43,289	1,343	...	16	250	0	50	Lake	Gravitation
Springfield, Mass.	26,703	30,000	654	280	...	...	...	50	Springs	Gravitation
Nashville, Tenn.	25,865	26,000	...	...	...	...	...	540	... ...	... ...
Covington, Ky.	24,505	...	...	...	...	...	...	550	... ...	... ...
Salem, Mass.	24,117	26,000	544	209	6	...	...	10	Aqueducts	Reservoirs
Quincy, Ill.	24,052	...	...	...	...	...	...	464	... ...	... ...
Manchester, N.H.	23,536	30,000	673	266	22	...	...	870	Lakes	Gravitation
Harrisburg, Penn.	23,104	...	...	...	...	...	...	250	... ...	... ...
Trenton, N.J.	22,874	...	...	...	...	...	...	10	... ...	... ...
Peoria, Ill.	22,849	27,000	309	150	6	...	...	440	Illinois River	Holly System
Evansville, Ind.	21,830	35,000	629	263	...	...	...	360	Ohio River	Holly System
Atlanta, Ga.	21,789	...	...	...	...	...	...	1050	... ...	... ...
Salt Lake City	...	26,000	431	301	16	...	...	...	Mountain Streams	Canals
Burlington, Vt.	...	18,000	224	87	6	...	...	...	Lake Champlain	Force
New Bedford, Mass.	21,320	...	...	...	...	...	...	50	... ...	... ...
Oswego, N.Y.	20,910	...	...	...	...	...	...	250	... ...	... ...
Elizabeth, N.J.	20,832	25,000	272	...	5	...	...	30	River	... ...
Poughkeepsie, N.Y.	20,080	23,000	372	138	3	...	...	50	Hudson River	Reservoirs

Camden, N.J.	20,045	...	...	...	...	...	...	20	... ...	... ...
Davenport, Iowa	20,038	...	...	...	...	...	...	690	... ...	... ...
St. Paul, Minn.	20,030	35,000	594	298	15	...	...	800	River	... ...
Erie, Penn.	19,646	...	...	...	...	...	...	600	... ...	... ...
St. Joseph, Mo.	19,565	...	...	...	...	...	...	950	... ...	... ...
Wheeling, W. Va.	19,280	27,000	410	162	4	...	...	675	Ohio River	Reservoirs
Norfolk, Va.	19,229	20,000	614	270	1¼	...	...	15	Rivers	Holly System
Bridgeport, Conn.	18,969	...	...	...	...	...	...	10	... ...	... ...
Petersburgh, Va.	18,950	...	...	...	...	...	...	25	... ...	... ...
Dubuque, Iowa	18,434	...	...	...	...	...	...	675	... ...	... ...
Chelsea, Mass.	18,547	20,000	455	177	5	...	...	30	Mystic Lake	Gravitation in Cement Pipes
Bangor, Me.	18,289	...	...	...	...	...	...	50	... ...	... ...
Leavenworth, Kan.	17,873	...	...	...	...	...	...	800	... ...	... ...
Fort Wayne, Ind.	17,718	...	...	...	...	...	...	650	... ...	... ...
Springfield, Ill.	17,364	20,000	404	125	4	...	...	600	Sagenaw River	Reservoirs
Auburn, N.Y.	17,225	...	...	...	...	...	...	650	Cayuga Lake	... ...
Newburgh, N.Y.	17,014	...	320	153	...	...	...	80	Wells and Reservoirs	... ...
Grand Rapids, Mich.	16,507	...	...	...	...	...	...	675	... ...	... ...
Sacramento, Cal.	16,283	20,000	403	138	½	...	...	25	Sacramento River	Holly System
Terre Haute, Ind.	16,103	25,000	326	...	4	...	...	450	Wabash River	Force
Vicksburgh, Miss.		16,000	618	297	4	...	...	...	River and Rain Water Reservoirs	... ...
Elmira, N.Y.	15,863	21,000	291	110	...	...	...	860	Streams and Lakes	Water Works
Augusta, Ga.	15,389	20,000	784	366	...	...	...	600	River and Wells	... ...
Cohoes, N.Y.	15,357	...	...	...	...	...	...	30	... ...	... ...
Newport, Ky.	15,087	...	...	...	...	...	...	500	... ...	... ...
New Brunswick, N.J.	15,058	...	...	...	...	...	...	90	... ...	... ...
Burlington, Iowa	14,930	...	...	...	...	...	...	940	... ...	... ...
Lexington, Ky.	14,801	...	...	...	...	...	...	944	... ...	... ...
Austin, Tex.	...	14,000	256	75	3¾	...	...	...	Rivers and Wells	... ...

II. THE SANITARY GEOGRAPHY AND TOPOGRAPHY OF THE CITIES OF THE UNITED STATES.—1. *The Maritime Cities and those upon Rivers with an average altitude less than* 300 *feet above Tide-level.*—Seventeen of the States border upon tidal waters of the Atlantic or of the Gulf of Mexico, and the District of Columbia at the City of Washington receives the tidal afflux of the Atlantic Ocean by the Chesapeake and the Potomac.

Of the fifty cities in the United States which, at the time of the census in 1870, had upwards of 25,000 inhabitants each, there are twenty-five (not counting the cities of the Pacific coast) that are situated upon or within 250 feet of tide-level. Of the 260 populous towns having over 5,000 inhabitants each, and having some form of sanitary government, 50 of the largest of them have the same relations and exposures at the tide-level as have the 25 cities above mentioned. These 75 cities and populous towns which are at and near the tide-water or tidal level of the Atlantic and its affluents present fields for sanitary observation and study that can be made serviceable to the world.

Yellow fever has, during the past hundred years, visited and prevailed in 220 of these cities and towns, and places near them; though peculiarly the scourge of the Atlantic tropics, this singular pestilence is liable to be conveyed to and planted in all of these localities. The promise of sanitary science is, that, without serious impediment to the interests and movements of commerce, even this pestilence will be stayed from its former habit of destroying.

Upon the map of this country a contour line can be drawn along the coasts and rivers where some degree of sanitary surveillance may always need to be exercised in certain seasons and under certain conditions of temperature, etc., when yellow fever gains a foothold in a port with which intercourse is continually maintained by water. This fact respecting the sanitary history of the tide-water and the southern river towns of the United States has to be borne in mind whenever the prevention of yellow fever and special kinds of sanitary police measures or quarantine against epizootic diseases are in question. It is no light matter that the dangers to which Lisbon, Barcelona, and St. Nazaire have at rare intervals been exposed, and which have been occasionally a matter of concern at Southampton and at Swansea, are so frequently real dangers to the cities and ports along the low levels here described in America that certain authority and sanitary duty to exclude and specially control the vessels or materials which

convey the hidden germs of yellow fever are requisite for the protection of the public health in these places, though such authority needs to be exercised only at rare intervals and against particular vessels or cargoes. It must here be remarked that the presumption that these American ideas of external sanitary police measures are not well founded is really a serious mistake upon the part of persons who have not closely examined the evidence upon the subject. The experience of the British Navy, the Royal British and Central American Mail steamships (Peninsular and Oriental), and the events at Swansea in 1865, as well as the lessons taught at Lisbon in 1857, and at St. Nazaire, on the French coast, in 1861, show that the authority to take precautionary measures to arrest the spread of this scourge of the tropics of the Atlantic must not be denied. It is scarcely less important to the best interests of commerce than to the welfare of human life. But it is a kind of authority which will be called into exercise less and less as the sanitary condition of cities and that of the mercantile marine progresses in improvements. Indeed it is not doubted that the disease itself may wholly disappear and be known only historically when the natural habitats of this remarkable pestilence are brought under the full dominion of sanitary regulations.

As great numbers of these low-lying cities and towns are subject to certain natural conditions of insalubrity in common and require special sanitary treatment, we will, in a subsequent section, give an outline of the present sanitary condition and health government of each one in the order of latitude from the north to the southward.

2. *The Cities upon the affluents of the St. Lawrence River and Lake Ontario, the Eastern Slope of the Alleghanies.*—The small cities of Vermont and northern and western New York, namely, Burlington, Vt.; Watertown, Ogdensburg, Oswego, Utica, Syracuse, Auburn, Rochester, and Buffalo, in New York; and Erie, Pittsburg, Harrisburg, and other cities upon the eastern Alleghany slope, in Pennsylvania, and the few interior cities of Virginia and North Carolina, constitute this group of cities. Having a high altitude, and being upon great geological slopes of gneiss, transitional limestone, and sandstones, and situated upon great affluents that wear their way between hills of diluvial gravel, these cities and the populous towns, which now are more than eighty in number, and which have from 5,000 to 15,000 inhabitants each, enjoy great natural facilities for health and the greatest length of life which can be attained in cities.

The paludal malaria that in early years of their growth afflicted such cities as Syracuse, Auburn, Buffalo, Sandusky, Toledo, and Detroit, in consequence of neighbouring marshes and saturated lands, is now rapidly disappearing, as a result of general works of drainage and the thorough culture of the soil.

The water supplies of this group of cities are excellent in quality, and are unfailing. The annual rainfall is heavy, varying from 28 to 60 inches depth of water. The food supplies, especially the succulent fruits and all cereals in this grand central and Appalachian region, constitute, with its water supplies and the advantages of altitude and drainage, the first elements of security to the public health. In the notes upon the present state of the public health in these cities it will appear that the yearly death-rate in some of them is less than 18 per 1,000.

3. *The Cities of the Mississippi Valley and Great Interior Basin of the United States.*—The great valley, which extends from northward to southward nearly two thousand miles, and from Western Pennsylvania, Virginia, and North Carolina to the head-waters of the Colorado and the Missouri, comprises six millions of the eight millions of square miles comprised upon the entire continent of North America.

The vast alluvial bottom of this great basin is now dotted over with cities and new towns, and in but few of them has sanitary government assumed such forms and authority as to have redeemed them from the malaria which is the first inheritance bequeathed by such rich alluvial soil and its decaying burden of vegetation and humus when civilisation accepted such gifts from Nature.

As each of the chief cities in this largest of these regions will be mentioned in a subsequent section, we pass on to the great interior table lands and the eastern slope of the Rocky Mountains.

4. *The Cities of the Elevated Plains upon the affluents of the Colorado and the Rio Grande and Western branches of the Missouri.*—The cities of Denver, Santa Fé, and Salt Lake, at the western base of the great mountain axis that had for ever shut off the Pacific from the East until the railway threaded through the passes, are situated at altitudes which offer new opportunities for useful sanitary study. Health government and correct records have scarcely become organised, but, so far as known, the enormous death-rate in infancy and the acuteness of certain fevers and inflammatory diseases are facts of chief importance in those regions.

5. *The Cities of the Pacific Slope and Coast.*—These cities and the regions they occupy offer the latest and in some respects very promising fields for obtaining the most complete healthfulness and long continuance of life. From Southern Oregon to the southern line of California, the wheat of Attica and the vineyards of the Xeres are excelled. The habitable globe nowhere else offers for man's use more perfect food, better water, or more invigorating climates.

The peculiar disadvantages of the new cities and the bad influences of evil habits have given death-rates that correspond with excessively active causes; but the health government of the cities is bearing most promising fruits. The State of California has its general Board of Health, and the chief city is rapidly extending its sanitary improvements. These points will be presented in some detail in another section of this paper.

Memoranda of Endemic and Epidemic Phenomena in American Cities.

Zymotic diseases in several of the cities of the Mississippi Valley cause nearly, and sometimes fully, one-half the mortality each year. Pulmonary phthisis is not as prevalent, relatively or even absolutely, as in the cities of the Eastern States.

Fevers of the endemic kind have been conspicuously prevalent and fatal in nearly all the cities, from the oldest to the newest, during the first stage of their growth and organisation. But since the practice of introducing pure water supplies and developing an attendant system of sewerage has become common in new cities and rapidly-growing towns, all endemic fevers have been less noticeable. Diseases of the alimentary organs, which terminate in fatal diarrhœa, are the most destructive of all the maladies of infants in our cities, yet only a few of the cities, or but few districts in them, suffer an endemic prevalence of such fatal and obstinate diarrhœas as have been common in European cities. The better supply of food and of pure water among the poor has helped in this respect in the American cities.

Typhoid fever, the enteric pest of old cities and of neglected towns and domiciles, has done destructive work in many places in the United States. Though long ago nearly expelled from the larger cities, as their abundant water supply and sewerage extended to all quarters, the enteric fever continues to be the pest of unsewered cities and of the towns in which cloacal nuisances and defiled well-water perpetuate it.

The statistical abstract in this paper presents the record of fatal cases of this fever for a few cities, but the census returns under the head of causes of death in the year ending June 1, 1870, show a total footing up of mortality charged to this pest of towns which reads as follows:—

Total Number of Deaths by Enteric Fever in the United States in the Year ending June 1st, 1870, 22,187.

State of Alabama	419	State of Mississippi	333
„ Arizona	11	„ Missouri	1,395
„ Arkansas	237	„ Montana	9
„ California	292	„ Nebraska	52
„ Colorado	9	„ Nevada	14
„ Connecticut	444	„ New Hampshire	302
„ Dakota	2	„ New Jersey	336
„ Delaware	82	„ New Mexico	90
District of Columbia	62	„ New York	1,939
„ Florida	107	„ North Carolina	864
„ Georgia	741	„ Ohio	1,283
„ Illinois	1,757	„ Oregon	52
„ Indiana	1,024	„ Pennsylvania	1,889
„ Iowa	521	„ Rhode Island	88
„ Kansas	204	„ South Carolina	515
„ Kentucky	661	„ Tennessee	687
„ Louisiana	449	„ Texas	464
„ Maine	608	„ Utah	24
„ Maryland	434	„ Vermont	212
„ Massachusetts	1,142	„ Virginia	376
„ Michigan	666	„ West Virginia	167
„ Minnesota	236	„ Wisconsin	464

The frequent occurrence of the true typhoid or enteric fever in every State of the Union, and the wide diffusion of the belief that in the presence of neglected excremental nuisances and neglected house-drainage it is an infectious pest, are facts that have recently stimulated the activity of sanitary and civic authorities.

The exanthematous fevers of childhood are excessively destructive in the older cities, and generally less so in the new cities and towns. The fatality and persistency of scarlatina in the larger cities of the Atlantic group is a circumstance to be noted.

Diphtheria and cerebro-spinal meningitis have in numerous instances proved more destructive in the smaller cities and large villages than in the chief cities. But during the past three years the City of New York has suffered excessively from each of these maladies. They have everywhere seemed to prevail as epidemics which obey certain laws of endemics that associate them with defective surface-drainage and local peculiarities of the atmosphere.

Phthisis pulmonalis has so great a predominance in the

list of causes of death in adults, in all the eastern and northern cities, that the general increase or decrease in any city or district is regarded with special interest. That it has been decreasing in certain cities and large towns in which systematic and deep drainage is being thoroughly effected, is quite certain. This fact was observed by Dr. Bowditch, in the State of Massachusetts, before the medical officer of the Privy Council, Dr. John Simon, called attention to like facts in England.[1] Though a constitutional disease, generally considered, its endemic relations to surface saturation and damp grounds and dwelling-places will not be disputed by good sanitary observers.

In several of the American cities the extent of surface saturation and superficial ponds, of wet cellars and damp grounds about and beneath dwellings, has been a great cause of disease. New York, Chicago, and St. Louis have presented examples of this source of harm to health, and the two last-mentioned cities still suffer excessively from this evil.

The Sanitary Organisation and Health of the Cities.—In the order of their commercial importance and the number of inhabitants each of the large cities will now be noticed.

NEW YORK.

Sanitary Organisation.—A municipal Department of Health, governed by a Board of Commissioners, consisting of two expert scientific men, the Chief Medical Officer of Quarantine, and the President of the Board of Police.

The executive service of this Board comprises one superintendent and one assistant-superintendent, and ten sanitary inspectors, and from ten to thirty assistant-inspectors, all educated physicians, who give nearly their entire time to the Board's service; a disinfecting and cleansing corps, under the superintendence of an expert chemist.

The Bureau of Vital Statistics of the city is allied to the Health Department, and its registrar is appointed by the Board. The records of the Bureau and researches which are steadily in progress therein are daily tributary to the discovery of causes of disease and to the promotion of sanitary duties.

An exact record of the causes and local circumstances of mortality in each district and in every tenement dwelling is

[1] See Report of Dr. Henry I. Bowditch on 'Consumption in New England; or, Locality one of its Chief Causes.' Boston: Ticknor & Fields, 1862. Also, Reports on the Geographical Distribution of Consumption, by Dr. H. I. Bowditch. In Reports of State Board of Massachusetts. Ninth Report of the Medical Officer of the Privy Council, 1867.

maintained as a part of the daily service of this Bureau of Vital Statistics. About one-half of the inhabitants of the city being in tenement or congregate dwellings, in which four or more families reside, at monthly rentals, this class of records has a special importance. The annual summing-up of the record against some of these tenement houses shows that, in particular houses, the deaths have been eight and even ten or eleven in one house. Numerous houses of this kind have been vacated and cleansed or remodelled by official orders of the Health Department.

This department has legislative powers. Its enactments, in accordance with general provisions of the State laws, are sustained by the highest courts. The system has worked most satisfactorily and successfully from 1866 until the present time. Under the present Board, all appointments to inspectorships and clerkships are competitive, in accordance with Civil Service examinations. It is generally admitted in the State of New York that no other department of the government has succeeded in bringing into its service so large a proportion of expert and well-educated officers and employés as the Health Department has.

The power of this department of the city government to define and abate nuisances against the public health, and to initiate proceedings to secure the improvement of tenements and the drainage or purifying of places, confers signal advantages which the courts of last appeal have fully sustained. This authority and duty to institute all proceedings for the application and enforcement of sanitary laws and regulations, and to hear and judge of evidence, and, if necessary, take proceedings for the actual execution of important orders whenever the parties offending are delinquents, was, during the first few years of its working, warmly contested; but the Board's authority to enforce compliance with its requirements within the assigned sphere of its jurisdiction is now rarely disputed.

The practical importance of this great example of sanitary administration in the largest American city is well stated by the author of the Metropolitan Health Act of New York (1866), Hon. Dorman B. Eaton, now President of the U.S. Civil Service Commission, who, in a recent address, said, 'Among all the benefits it has secured for the future I hold that by no means the least which is conferred by the decisions of the highest court of the State to the effect that, under our American constitutions, it is possible to abate the worst classes of nuisances without a resort to the delay and the expense of a jury trial. These decisions are the first solid legal bases, on

this side of the Atlantic, of truly effective sanitary administration.'

The degree of security to life and health in this city is not to be judged by the enormous excess of mortality that occurs during the hot season, for that increase is so specially the effect of summer cholera of the infant population in the tenement-house districts that it is an event and a subject to be separately considered.

For example, the total number of deaths in New York in the summer quarter of 1873 was 8,983. The number of decedents who were five years of age and upwards was 3,495; the number under five was 5,488. The death-rate in that portion of the population between five and the oldest ages was equal to 15·85 per 1,000 yearly, while in the child population under five years old the mortality was equal to a yearly rate of 185·17 per 1,000.

After eight years of faithful sanitary efforts under the new health laws, the death-rate in the infant population shows very little decrease; the total mortality in the city shows an obvious decrease, and that decrease is found almost solely in that portion of the population which is between the ages of fifteen and forty-five years. Fevers and some other preventible zymotic diseases have decreased fifty, sixty, and even seventy-five per cent., since this work of sanitary reform began.

The number of deaths from enteric typhoid fever in the three years preceding the institution of the present sanitary system in New York was 1,765; the total number in the next three years was 1,248, and the total number in the year 1873 was 295. We see demonstrated in New York the fact that, while under the first applications of efficient sanitary measures in a crowded city the rate of infant mortality may not be greatly diminished, the security of life and health has been decidedly enhanced in all the middle periods of life, or from fifteen to forty-five years of age.

The city has 288·54 miles of sewers, 253 miles of paved and 50 miles of unpaved streets. Both are under the direction of a Department of Public Works, and the cleaning of streets is under the supervision of the Police Department.

The external sanitary service or Quarantine Department of the port is under the superintendence of a Chief Quarantine Medical Officer, and is located upon an artificial island ten or eleven miles down the bay of New York, seaward.

Yellow fever has not prevailed in the city since 1822, but it has several times been epidemic along the bay shores, within a mile or two of the affected ships. The sanitary measures at

present in force, by the joint counsels and authority of the Health Officer of the port and the Board of Health, afford complete security against the epidemic spread of yellow fever into the city.

The vast immigration, which is every month pouring into the city from 12,000 to 25,000 emigrants from European ports, and which has amounted to 5,000,000 in the past twenty-three years, is under the medical surveillance of the Health Officer of Quarantine and the Commissioners of Emigration. The 'Emigrant Refuge and Hospitals' are too widely known to require description here. Five thousand persons can be at one time provided for in them. Emigrants, under these arrangements, less endanger the public health of the city than do seamen and ship hands; yet it is true that emigrants too often are carriers of disease.

The city, with an average death-rate of from 27 to 30 to the 1,000 of its inhabitants, and with more than half its population packed in congregate dwellings in the midst of the commercial district, upon an area of less than five square miles, presents sanitary problems which tax the ablest minds, and which largely involve the question of redistribution, wide dispersion, and rapid transit for the poorer classes. Already the opulent and middle classes of society enjoy a degree of sanitary security equal to that found in country villages or the best policed cities.

BROOKLYN.

As this outgrowth of the City of New York will ever be recognised as the Westminster and Brompton of the American metropolis, its sanitary topography and condition will be most suitably mentioned in connection with the foregoing statements. Its growth from a village to a city of 450,000 inhabitants has occurred in a period of one generation. It is a city of homes, and recently has become a centre of great manufacturing interests.

From 1866 to 1870 the Metropolitan Sanitary Act united Brooklyn and nearly the entire territory of five counties under one Board of Health. The municipal separation which has occurred under more recent legislation has left this city with a form of health government similar to that of New York. The description of that in the latter suffices for the former.

The higher altitude of most of Brooklyn than that of New York, from which it is separated by a tidal arm that is now being bridged, the greater extent of dwelling area, and open tree-planted ground about the common dwellings—for Brooklyn

spreads over twenty-two square miles a less number of inhabitants than New York has crowded in with all its commercial district upon less than five square miles—give the new city great hygienic advantages.

The water supply is of the purest quality, outflowing from the gravel of the southern slope of Long Island for twenty miles in a rural section, and thence pumped into a storage reservoir high above the level of the city.

The three pumps and the affluent conduit whence they throw the supply, send about 30,000,000 of gallons daily to the distributing reservoir and the city.

The death-rate in Brooklyn is a little lower than that in New York, but the city has undrained districts in two low-lying basins, populous with children, that give to Brooklyn a rate of child-mortality nearly equal to that of New York.

PHILADELPHIA.

With 122 square miles of area, extending up the Delaware and the Schuylkill rivers, and with broad and straight streets and ample dwelling grounds, Philadelphia will ever be most conspicuously the American city of home-life and domestic healthfulness. The census of 1870 found its 127,746 families distributed in 112,366 dwellings, with an average of only six persons in a house; while the New York dwellings averaged 14·72 inhabitants in each.

The Philadelphia Board of Health consists of twelve members. Its chief Health Officer is appointed by the Governor of the State; its corps of inspectors consists of thirteen non-medical men and sixteen vaccine physicians.

The registration of vital statistics is under the Board's direction.

The powers and methods of the Board are widely different from those of the Health Department of New York, yet large powers are given in cases in which the Board declares the existence of any nuisance dangerous to health.

Like the New York Board, it is deficient in the necessary authority to immediately enforce the cleaning of the streets.

The city death-rate is steadily lower than in New York. It was only 20·29 per 1,000 inhabitants in 1873. Its death-rate among children is much lower than in other large American cities, yet 42·72 per cent. of all deaths in 1873 were of children under five years of age.

With an abundant water supply, with unlimited extent of undulating, well-drained, and coarse diluvial ground, such as constitutes the greater part of the 122 square miles of the city,

and with the best market supplies of all products of field and pasture, and a climate well tempered and the means of universal industry and thrift unexcelled, Philadelphia is, and probably will ever continue to be, the most healthful of the great commercial cities in America.

Extensive portions of the older part of the city are at present in a bad sanitary condition, being badly built and crowded upon allies and lanes, in which the relapsing fever had sway in the spring and summer of 1870, in classes as debased as those of the St. Giles and Limehouse districts of London, or the High Street 'closes' of Glasgow.

The present death-rate in Philadelphia (21 in the 1,000 annually) may, by the agency of sanitary improvements that can readily be made in reconstruction of old quarters, and by sewerage and sanitary regulation of the city, be reduced to a yearly average of 17 or 18 per 1,000.

The city is but little exposed to the incursion of exotic fevers, though yellow fever formerly scourged it frequently and fatally.

The quarantine station and its hospital are located 15 miles down the Delaware river. That establishment and the hospitals for fevers and contagious diseases in the city are under the exclusive control of the municipal Board of Health.

The sanitary system is defective in respect of methods and authority for the prompt and decisive action which is a conspicuous merit of the New York system.

BOSTON.

The public health system of Boston is at the present time passing by an easy transition from old limits of the former city —the peninsula of Boston, which comprises less than 2½ square miles—to a circle of new cities and towns extending over 16½ square miles. The enlarged city now takes its place in the front rank of thoroughly organised municipalities.

The old Boston is becoming a vast commercial exchange, and it gained more than old London by 'the great fire,' for the width and grade of its streets and the state of its sewerage have been much improved. The outer ring of the new Boston surpasses all other cities and suburbs in America in the diversified indulgence and opportunities of home tastes and domestic culture. The old city was becoming unhealthful from overcrowding, but the present municipality comprises the dispersed population, and has organised an efficient sanitary system. The State Board of Health of Massachusetts effectually aids the municipal Board, and has already secured for the entire city

the concentration of its abattoirs at one centre in the suburb of Brighton. Water supplies and the general management of offensive and injurious kinds of city nuisances are receiving practical attention from the Board of Health and City Council.

The annual death-rate in Boston has for the past 15 years been quite steadily at about 26 in the 1,000, and the deaths of children under five years old constituted about 43 per cent. of the total mortality. Typhoid fever and diseases of the respiratory organs are relatively more frequent and fatal than in New York and Philadelphia.

The mean temperature in the year is of about $48\frac{9}{10}°$ Fahr. The temperature in July and August has a mean of about 69°, or about $2\frac{1}{2}°$ lower than that of New York and Philadelphia.

BALTIMORE.

This is now the seventh in rank of population, and the fourth or fifth in the relative amount of commerce of the cities of America. Its 267,354 inhabitants at the census in 1870 enumerated $10\frac{1}{2}$ per cent. as of negro origin. In the latter class of the population the death-rate is greater than in the white class.

The former class and the lower orders generally reside chiefly in a low and badly-drained district; but the greater portion of the city and all the better classes of inhabitants occupy a series of elevated hills and slopes remarkable for natural salubrity. The limitless capacity for extension outward upon high and healthful grounds insures the public health of Baltimore. The low quarters by the harbour have in past time suffered by incursions of yellow fever, but the recent improvements in grading, sewering, and paving, and sanitary police give entire security from that pest. A quarantine station is maintained several miles down the bay, seaward.

The Board of Health is appointed by the Mayor, and its powers are defined by the City Council.

The death-rate averages about 25 in 1,000 annually, and only 30 to 31 per cent. of the total number is of children under five years old. Neither in summer nor in winter does infant life suffer as great losses as in the cities already described.

The high and diversified site of the city, the separateness of the dwellings, and the freshness of all food supplies are among the distinguished hygienic advantages of Baltimore.

WASHINGTON.

The national capital occupies an extensive table land, which has an average height of about 60 feet above the high-tide level

of the Potomac. But besides this higher portion the lower grounds near the latter river are all becoming thickly populated. Malarial fevers afflict the inhabitants of the low grounds and contiguous slopes, but the drainage and sewerage of the better portions—the higher grounds—have, in the course of five years, rendered them healthful. Sharing the paludal entailments of all the tidal borders of affluents of the Atlantic in latitudes south of 45°, the first sanitary problem at the national capital was that of thorough drainage and the grading and sewering of the city. The plan of the city, with broad avenues and a vast number of open plazas, is favourable to sanitary interests. The public improvements have been projected upon a grand and expensive scale. This task has been in progress ever since the war of the rebellion ended, and upon it millions of national funds and myriads of popular imprecations are being expended. The work goes on and will go on, because the life and health of 140,000 residents and of a million of transient visitors are jeopardised by delay or interruption in this great duty of sanitary drainage, grading, and paving.

The Board of Health is appointed by the President, and derives its powers from the municipality under Congress.

The death-rate has steadily and rapidly decreased year by year as the sanitary improvements have progressed. The yearly death-rate is now officially reported as less than 20 per 1,000 inhabitants. The sanitary administration extends over both Washington and Georgetown, and comprises the county of Washington, having an area of about fifty square miles.

NEWARK, N.J.

A manufacturing city—a sort of Birmingham. Newark in New Jersey presents the same sanitary problems as the most rapidly grown manufacturing town of England. Its sanitary government is a fiction, and its health problems have received no exact treatment. Its death-rate is at 30 to 32 per 1,000 yearly, and in the year 1873 over half of the deaths were of children under five years of age.

JERSEY CITY.

Like Newark, this chief city of New Jersey is a vast workshop for New York, and it has become the second city in America for the docks, which accommodate steamships from European ports.

The Health Board and the city government are nascent organisations striving to grasp some plan of improvement

which will be adapted to the singular growth of the city. For this purpose five separate municipalities have recently been united under one head.

This unity of contiguous suburbs, which had grown until they touched at all points, was necessary for sanitary reasons as well as for general police purposes.

ALBANY, TROY, HUDSON, POUGHKEEPSIE, NEWBURGH, AND YONKERS, IN THE STATE OF NEW YORK.

This line of cities upon the banks of the Hudson River along a tidal course extending 150 miles northward from the City of New York have sanitary features in common. They are upon high banks and cliffs by the river, and their growth, which is rapid, extends inland indefinitely, according to the ability and taste of the families that seek such rus-urban homes.

The health government is vested in the City Council and appointed medical officers. The accurate registration of vital statistics is neglected in all these interior cities and throughout the State of New York, except in the two metropolitan cities first described.

PROVIDENCE, R.I.

This city, with a busy population of 99,608, and a larger proportion than any other maritime city, excepting Newark, of workers in manufactories, has a well-ordered sanitary government, superintended and organised by the well-known hygienist, Dr. Edwin M. Snow.

The death-rate has for ten years kept quite steadily at about 20 per 1,000, and 36 to 37 per cent. of the total mortality is of children under 5.

Omitting further description of maritime cities north of the yellow fever zone, let the fact be noticed that from Portland, in the State of Maine, and Portsmouth, N.H., to Charleston, New Orleans, Charleston and Memphis, by way of the Atlantic and its affluents, the summer temperature, much of the season, vies with that of the inter-tropical regions; that at the period of greatest heat and humidity experience has taught that perils from vessels from ports in which yellow fever prevails should be guarded against, not by the old but now impolitic practices of exclusion of commercial intercourse, but by exact medical observation, and any necessary and logically correct sanitary police regulations or orders thereon founded. The present regulations of the external sanitary police systems of Boston, Providence, New York, Philadephia, and Baltimore illustrate this principle.

CHARLESTON, S.C., AND SAVANNAH, GA.

These two great southern ports had, previous to the war, the devoted services of eminent medical scholars to aid the municipal authorities in the health government.

Crippled in means, and with the great changes in the commercial affairs since the war, there is at the present time great want of a sound sanitary system in both cities.

Death-rates are very high, and the means of security to health are very defective. Year after year the death-rate has exceeded 40 in the 1,000 inhabitants in each city.

The sanitary problems in and about these beautiful cities are the same which are being satisfactorily solved in and about the cities of Calcutta and Bombay.

NEW ORLEANS.

Occupying upwards of twenty square miles between a curve of the Mississippi River and Lake Pontchartrain, and at a level below that of the river surface, the great city of the South, like Calcutta on the mouths of the Hoogly, or Alexandria upon the Nile, has accepted the behests of commerce, and turns now to hygeia to find protection from the Python of the waters and slimy lagoons.

It was not until commerce had made large demands for streets and spaces by the river side that New Orleans felt, or at any rate recognised, the necessity for the sanitary preparation and defences which this emporium of the cotton and sugar products of the delta of the Mississippi would require. The historical fact that the New Orleans of Spanish colonial times was regarded as a salubrious place, as Dr. Lind, in his book on Hot Climates, says it was, is not to be doubted, for it was the partial shutting off the lagoon (bayou) waters and partial drying which opened the new era of fevers and other chief perils to health in that city.

Situated nearly 100 miles from the open sea (Gulf of Mexico), by course of the river, yet bounded by the tidal waters of the inland lagoon, Pontchartrain on the north, and having its surface two feet lower than that at high tide, and ten feet lower than that of the great river, the problem of civic cleansing and drying is combined with that of the engineering, by which the river itself shall be turned to the task of daily flushing and cleansing of streets and gutters on the one hand, and, on the other hand, so effectually pump and dyke off the waters as to secure healthful dryness of the city's surface.

This problem is being successfully but slowly solved. The

Board of Health is steadily securing the execution of larger works for these two great means of health.

Drainage canals and basins are at once open cesspools and the channel for cleansing away the foul outflowings of the city. The daily and constant onward flow through them to the great outfalls by which they enter Pontchartrain is effected by means of the draining machines, which are placed at the intersection of the drainage canals and bayous, which conduct the water northward to that great lagoon or lake. Eight or more drainage machines are kept incessantly in motion, lifting the water and sewage from the drainage canals and basins to the higher levels, onward beyond dykes and levees, thence pouring the foul flood into Lake Pontchartrain. A single machine is capable of lifting and sending forward 100,000 cubic feet of fluid per minute.

The commerce with West Indian parts, Brazil, and other yellow fever habitants exposes New Orleans in a special manner to the destructive presence of this scourge. But after suffering twenty-three fatal epidemics of this fever during the forty years preceding the year 1861, only one severe epidemic, that of 1867, has occurred in the past fourteen years (there were light epidemics in 1870 and 1873), though this fever has almost every year been communicated to some places in the city. The means resorted to for limiting the spread of the fever have induced a vigorous faith in the exact applications of sanitary principles.

The present system of public health government comprise medical members appointed by the Governor and other members by the Municipal Council, and the administration of sanitary laws and regulations, which are partly of State origin and in part the offspring of city legislation. The Quarantine system comprises inspection and anchorage stations, with hospitals, some seventy miles down the two principal outfall branches of the river.

The members of the Board may take action upon quarantine questions affecting the welfare of other portions of the State, and when so acting they constitute a State Board of Health.

All cemeteries, being necessarily a system of tombs, are wholly above ground, and most of them in the heart of the city.

The water supply is directly from the Mississippi river for common uses, but the rain water cisterns are largely preferred for domestic supply.

The annual death-rate fluctuates from 33 to 50 in the 1,000. Infants under 5 years of age give from 30 to 38 per

cent. of the total mortality. The waste of infant life in the white population is less than in the cities of New York and Chicago, but in the negro population the infant mortality is excessive, being nearly double that of the whites.

The experience of Bombay and Calcutta fairly offsets the sanitary experience of New Orleans, and by the same means that the former cities are proving how 'people may live in India and not die,' the latter is proving that both cholera and yellow fever may be rendered almost harmless in the city which in former years suffered most fatally from them.

A mean temperature of from 88 to 92 degrees Fahr. prevails from the middle of May until the middle of September, accompanied by a degree of atmospheric humidity equal to 77·40 of total saturation. New Orleans has nearly the same atmospheric conditions to favour the prevalence of yellow fever that Vera Cruz, Havana, Jamaica, and the Barbadoes have, where it is indigenous; yet there are good reasons for the opinion that it never was actually indigenous in the former city, or upon any portion of the Mississippi banks.

The disturbed and weakened condition of the State and the municipal legislation and governmental administration delays the great sanitary works which have been planned for redeeming New Orleans from the curse of paludal malaria and civic uncleanliness; yet, amidst difficulties, the work progresses with better results than the officers and students of its sanitary affairs had ever promised.

The drainage works are projected upon a colossal scale; and if Hercules succeeded in washing out the Augean filth by aid of the floods of the Apheus, that bore the filth onward in its channel to the sea, the drainage machines of New Orleans are succeeding in wholly withdrawing the water from some 13,000 acres of surface in such manner as to make healthful grounds.

The improved machinery that was set in motion for draining a vast marsh and water-covered area, upwards of 4,500 acres in extent, and which had always been thus covered, soon completely withdrew the surface and upper stratum of soil-water, and as the machine-wheels are unceasingly in motion lifting the water from its outfall canals and basins, the worst district of the city is now becoming healthful. The annual death-rate from malarial fevers, mostly 'congestive bilious fever,' in the populous Third District, which is contiguous to this newly-drained area, has decreased from 4 to 3·4, 1·8, 1·7, and finally to 1·7 per 1,000 inhabitants. That is, there is not half as much fatal fever in the adjacent three square miles now as in the years before this special drainage was devised.

By the arithmetic of such drainage a good lesson in the economy of health is taught. To aid in understanding the importance of such decrease in the fevers we may properly take the hospital records of the great Charity Hospital of New Orleans, which, in the five years preceding that war, admitted 50,033 patients, and of that total number 14,702 had malarial fevers, 3,155 yellow fever, 1,033 typhoid and enteric fever.

The death-rates previous to these drainage works averaged about 46 in the 1,000 annually, and its monthly extreme range was enormous, being found all the way from 31 to 78 per 1,000 yearly rate, for the months of February and September as minimum and maximum periods. But the day of sanitary improvement has dawned upon this city of the South, and already the life assurance risk has been diminished 20 per centum for the ages between 20 and 50 years; and as the risk was, until within ten years, 100 per cent. greater at those ages than it was and now is in Philadelphia, New York, Baltimore, and Providence, it may be well for the world to estimate the value of sanitary improvements by the money value and assurance risk of a man.

MOBILE, GALVESTON, AND OTHER CITIES AT OR NEAR TIDE AND LEVEL OF THE GULF.

These cities and ports are all liable to occasional incursions of yellow fever. They are built upon the sand or coraline bottoms of the old-time sea shoals. Their means of drainage and sewerage, and the defectiveness of water supplies, of good quality and adequate quantity, are permanent obstacles to good sanitary conditions. Not one of them yet has a sound health government, excepting Galveston and San Antonio.

SAN ANTONIO, TEXAS.

This beautiful and salubrious inland city is a sort of Dresden in the south-west of the United States. It is a centre of cultivated German society and thrifty enterprise.

With about 18,000 inhabitants upon 36 square miles, and with an unlimited area for the extension of the town, it has a good sanitary government. Its vital statistics are carefully registered and interpreted for hygienic and social purposes.

Its death rate is 20 in 1,000, and only 31 per cent. of the mortality is of children under five years of age. The water supply of San Antonio is a marvel of natural springs, which pour forth at a distance of only two miles from the city a river of the purest water, sufficient to supply one million of inhabitants.

BATON ROUGE, NATCHEZ, VICKSBURG, AND MEMPHIS, UPON THE MISSISSIPPI; AND NATCHITOCHES AND SHREVEPORT ON THE RED RIVER (AFFLUENTS OF THE MISSISSIPPI).

These important inland ports are located upon the bluff riversides, and each has an average altitude of less than 266 feet above sea level. Each one is capable of being made as healthful as any city similarly located as respects altitude and the near surroundings of paludal districts. They are mainly built upon the sides and table summits of steep bluffs of sand-rock and diluvium, while near by and for hundreds of miles beyond alluvial grounds are at once the prolific source of wealth and paludal malaria. These cities enjoy a sufficient breadth of elevated lands to secure the means of health when their sanitary government shall have been duly organised and arrayed against the existing causes of epidemic fevers. Even the city of Natchez, which is perched upon a steep hill-top or bluff which looks down upon the great river 260 feet beneath an almost perpendicular precipice, has suffered again and again from yellow fever introduced at the steamboat landings, and spread by the perfectly well-known and preventible causes against which a sound system of public health government would effectively guard. From Natchez, oftener than from any other American city of similar commercial importance and population, has this terrible scourge been spread to other places, through sheer neglect of dutiful regard for the claims of society and for the natural laws of that infectious scourge.

The City of Vicksburg, sixty-five miles northward and upon the same side of the Mississippi river as Natchez, is built upon hills reaching an altitude of 350 feet above the sea, and which are deeply intersected by ravines. Its sanitary government, like that of Natchez and the smaller ports of the river and bayous, is not competent to protect it against incursions of yellow fever, and of the still more fatal congestive malarial fevers which can be prevented only by systematic drainage of vast areas of inland plantations, as well as the ravines and basins of the city itself.

The ports of Natchitoches and Shreveport, on the Red river in Louisiana, have suffered for want of sanitary drainage and police of the towns and their immediate vicinity. The city last mentioned is located 532 miles from New Orleans, up the Mississippi and Red rivers, and has an altitude of 220 feet above the sea.

Its sanitary government is impotent. When the yellow fever appeared in that city in 1873, there was no form or

source of sanitary authority adequate to meet the threatening epidemic.

Unskilful grading and bad streets, and the wholly unpoliced condition of the streets and quarters, afforded an open field for the fever that in the year 1873 swept through nearly all habitations in which residents ventured to remain. Beginning on August 12, in a population of 12,000, it attacked upwards of 3,000 of the 4,500 who remained, and killed 759 of its victims. Though plainly introduced from Havana *via* Orleans, it at last pervaded the city so universally, and extended so widely inland, whereon persons fled 'with purse and scrip' (for the goods of healthy persons became carriers of infection, just as Dr. Lyon proved at Lisbon), that common opinion announced the medical fallacy that yellow fever is spread by means of personal contagion. The Boa Vista experience and errors were re-enacted;[1] and this was not strange, where 70 in every 100 took the fever, and 27 in every 100 of the patients died. The cash value of the losses by this one sweeping of a pestilential fever in and near a little city of 12,000 inhabitants exceeded the sum by which sanitary security could have been given to the town for a century by suitable local improvement and the establishment of a sound health government. It was the second visitation of yellow fever to Shreveport and the up-river region. It proved its excessive virulence and its infectious quality by its repropagation from station to station along the lines of railways, repeating the experience of this pestilence in the towns of Northern Texas, as suffered in Southern Texas in 1867.

The fever was distributed and spread to a hundred or more trading towns, small hamlets, and plantations in districts where it could not become generally epidemic, yet was epidemic in particular houses and streets.

MEMPHIS.

This, the chief commercial city of the State of Tennessee, upon ground 250 to 300 feet above sea-level, and by river 250 miles further from the gulf than Shreveport, last year (1873) suffered for the third time from this West Indian scourge.

This city is, like all the other chief cities upon the Mississippi river banks, built upon a high bluff and its table lands beyond, but the immediate fluvial margin and unpoliced little patch of undrained low grounds and neighbouring streets by

[1] See Report of Dr. M'William upon the Yellow Fever at Boa-Vista and upon the 'Eclair.' Also Dr. King's Report.—Parliamentary Blue Book.

the waterside offered all the facilities for planting and reproducing the germs of pestilence. The time and conditions for starting the deadly growth came when, on August 10, a river steamboat from New Orleans with yellow fever epidemic on board hauled up along shore and put a dying patient and his 'kit' into the cabin of a poor Irishman in the low and filthy place by the riverside before mentioned. The poor population in that infected cabin soon sickened and died, and thence the pest swept along, house by house and street by street, up the hillside; and through the lowest grounds and by the ravines and streams it swept most fatally, until November 20, destroying 1,300 lives in that half of the 40,000 inhabitants who did not flee. One-fourth of these residents were attacked, and more than one in every four of the sick died.

The chaotic state of the municipal government, and the want of law and authority to sustain the Board of Health in its duties, left the march of infection unchecked.[1]

The utter impotency of the laws of the State of Tennessee, the want of sanitary organisation of public authorities, with power competent to deal with this pestilence or to prevent it, and to recognise the true sources of danger, account for the introduction and ravages of the fever as here described.

Incited to impulsive activity, the municipal authorities have, in 1874, attempted to institute sanitary improvements, but it is the misfortune of the cities upon the Mississippi banks to have neither State nor civic authority and organisation to supply the necessary means for sanitary protection.

REMARKS UPON THE CITIES OF THE ATLANTIC COAST AND THE GULF OF MEXICO.

The behests of commerce, by water and by land, the demands of trade upon the best of the country's business talent and trained skill in the cities of this vast district, the fact that the life assurance test must soon be distinctly applied in each and all of these cities, and that already the proof is clear that the life risk in particular cities and regions is 100 per cent. greater than in New York, Philadelphia, and Boston, cannot fail to secure, ere long, the adoption of a business-like view of the economy effectual and skilfully conducted health government.

The absence of sound and adequate general statutes and measures for preserving and improving the public health in the respective States is most obvious, and results in pernicious consequences to the commercial cities and towns of the regions

[1] See 'Report of Yellow Fever in Memphis:' Public Health Papers, American Public Health Association, 1874.

last described. But there is nothing irremediable in the natural characteristics of the site of the cities here described, nor in the chief towns throughout the twenty States that participate in the condition of low altitude above tide-level. Paludal malaria and all its consequences have afflicted a great portion of these cities and towns of the maritime and low regions from New York to New Orleans, and to the bases of the hills whence flow the affluents of the Gulf of Mexico and the Atlantic.

The cities south and southwestward in this region, beyond Baltimore, are mostly built upon and surrounded by alluvial or cretaceous grounds. Their water-supplies are best obtained from the great rivers near them, or from the rains, which are exceedingly copious every year.

The river supplies are readily purified, to a degree of which the Thames with its sewage is not susceptible, by means of sedimentary reservoirs and filter-beds.

Even New Orleans and Mobile have the advantage of Calcutta, though the Hooghly supply has reduced the mortality of the latter city, as the Mississippi soon will diminish the sickness and mortality of hundreds of cities and towns upon its banks. The rain-cisterns, the wells, and the surface streams, by which more than half the water-supplies are at present obtained in the cities and towns south and south-west from Virginia, expose the people to unsuspected causes of fatal disease.

The propagation of enteric maladies, and even the most grave fevers, by the drinking of such waters, is a fact frequently demonstrated in American towns.

Improved methods for introducing water-supplies to towns, at any altitude and however remote from the best sources, now encourage all thrifty and well-informed communities to seek a supply from such sources. The financial embarrassment of the southern cities and towns has delayed the introduction of these improvements to as great an extent as at the North.

The defective civil organisation of large villages and the cities and States comprised in this southern region, when amended, will speedily present a demonstration of the fact that health laws and a reduction of mortality are concomitants of improvements in local government and vigilant police regulations.

Systematic drainage and civic cleanliness are duties now so neglected in the cities last described that this neglect alone is justly charged with half of their mortality.

The large percentage of the negro element in the city populations of the Cotton States gives an augmented ratio of deaths, but chiefly in children under five years of age.

The cholera last year (1873) made worst havoc among negroes, and that class became the most common carriers of the disease from place to place. But it is due to the coloured race to state that when instructed they as readily conform to sanitary laws as any other class of inhabitants.

Cities upon the Northern and Eastern Slopes of the Appalachian Ridge.—The fourteen most northern and north-eastern States, whose cities are comprised in this group, have concentrated in their cities and large towns vast industries in iron and all kinds of manufacturing. By their thrift and wealth, together with the advantages of natural conditions of salubrity, this northern group of cities present already, in their young growth, several instances of remarkably good sanitary results, such, for example, as that of Rochester in the State of New York, Cleveland in Ohio, and Detroit in Michigan. In all of these cities the inhabitants are more generally educated and thrifty, and, to a large degree, they occupy dwellings which they own and improve as family homesteads.

With a birth-rate equal to 33 per 1,000, and with about 12 per cent. of the population being children of five years old and under, most of these cities have a death-rate in that class so much less than is experienced in the maritime cities that this cause of gain to life renders the general rate of mortality considerably lower than in the latter.

BURLINGTON, VT.; WATERTOWN, UTICA, OSWEGO, SYRACUSE, AUBURN, ROCHESTER, ELMIRA, AND BUFFALO, N.Y.

These nine cities are examples of the smaller class of cities which have become most important manufacturing and trading towns, having unlimited means of commercial communication with the great lakes and with maritime ports. They have grown from small hamlets without greatly changing their characteristics of tree-planted towns, with unlimited area for the extension of wide streets for the separate homes and gardens of families. They are favoured by nature with all the means of public salubrity. The occasional severity of cold, and an exposure to more sudden alternations of temperature than the regions further south, render the prevalence and fatality of diseases of the respiratory organs correspondingly greater than in cities south of the 42nd parallel of latitude. The death-rate in these cities need not rise to 20 per 1,000 annually; it does not often exceed this ratio in Burlington and Rochester, where the drainage, water supplies, and wide distribution of the population afford the best security to health. These cities have a death-rate of less than 20 per 1,000.

The sanitary government of these nine cities is controlled by the municipal councils, with a medical officer, usually entitled 'Health Officer.' Sanitary laws and regulations are meagre, and they are inefficiently executed. The intelligence and enterprise of the citizens have devised and executed important public works and laid on supplies of pure water.

CLEVELAND, SANDUSKY, AND TOLEDO, OHIO; DETROIT, MICH.; CHICAGO, ILL.; AND MILWAUKEE, WIS.

These cities of the great lakes have advantages of pure water supply and of an unbounded inland extension of dwelling area, thereby securing the most essential means of permanent sanitary well-being.

Cleveland.—This chief city of northern Ohio presents an example, like that of Rochester in N.Y., of a great manufacturing population living so intelligently and healthfully in well-ordered and well-distributed homes that the chief sanitary questions are favourably settled by the modes of domestic life, and most of the public health regulations which need to be enforced are willingly accepted as public obligations by the people. With a population of 100,000, and an altitude of about 650 feet above sea level, and about 100 feet above the surface of the lake at its side, Cleveland enjoys, as a great portion of the State of Ohio does also, the climate of the vine. It is in the latitude of Padua and Modena. The death-rate in Cleveland, since water supplies and sewerage have been introduced throughout the city, has averaged about 19 in 1,000 annually.

The sanitary experience of Cleveland, like that of Rochester, may justly be quoted as that which the smaller and best ordered inland cities and large towns enjoy when they have systematically drained the town site or laid on a good supply of pure water.

Chicago.—With nearly 400,000 inhabitants this city is the growth of a single generation. It is forty-two years since the military forces which were hastening forward to conquer the American Indians in the vicinity were delayed and decimated by cholera that went with them from Buffalo to the barrack hospitals at Fort Dearborn, on the present site of Chicago—the survivors of the cholera looked out upon vast swamps, through which Chicago River without visible motion passed into Lake Michigan. Upon the western shore of that lake sprang up the city, so rapidly and so defectively planned and built that the chief streets and buildings had to be elevated to a higher grading in order to secure dryness and sewerage, and which at last were swept by conflagration in 1871. Yet Chi-

cago grows as no other city ever grew, regardless of sanitary and topographical disadvantages, for its shipping depôts for the cereal grains and for animals used for food are the greatest in the world.

Drainage, grading, filling, and sewering have been problems more difficult in this chief city of the western lakes than the same problems were in St Petersburg until now. A masterly treatment of its chief sanitary problems has already been commenced in Chicago. They comprise the following leading points:—

First.—The introduction of an ample supply of pure water from a distant station of ingress in the midst of Lake Michigan, nearly three miles off shore, into all portions of the city. This work is now accomplished.

Second.—The thorough drainage and sewerage of the city by a system of main outfalls and a series of intercepting sewers, the emptying of which into the lake shall be effected by means of machinery, without using or defiling the sluggish river. [Chicago River has only one-sixth the width of the Thames at London, and is only thirteen feet in depth, and it now has to be flushed by artificial contributions to its waters.] The engineering problem now also contemplates draining a portion of the city by an artificial channel into the Illinois River and the Mississippi, for this great city plain is on the 'hydrographic divide' between the Gulf of Mexico—by way of the rivers just mentioned, and the St. Lawrence—by way of the lakes and Niagara Falls, and is at an altitude of 578 feet above tide.

Third.—The grading and filling of all low-lying grounds for miles in extent.

Fourth.—The sanitary and commercial regulation of the movement and slaughtering of food animals, so as to give entire immunity to the city while a million and a half of the animals are slaughtered, packed, &c., and another million every year is moved alive through the city to eastward regions.

The Board of Health consists of the Mayor and six experienced citizens, three being physicians. They hold office six years. The chief officer under the Board is the Sanitary Superintendent, who is also Registrar of Vital Statistics.

The history of epidemics in Chicago shows how important these sanitary works must be which shall give immunity from their recurrence. Cholera, erysipelas and dysentery, scarlatina and diphtheria, have in turn committed epidemic ravages. The death-rate, which for six years past, under the present improved sanitary system, has been only 27 in 1,000 inhabitants annually, formerly ranged from 40 to 80 in 1,000 in different epidemic years.

Facts relating to the sanitary government and death-rates in Detroit, Sandusky, and Milwaukee may be noticed in the abstract in a preceding section of this paper. The public works and sanitary condition of each of these cities are upon a favourable footing, like those of Cleveland.

Passing at once from these cities of the northern lakes and from those of the eastern slope of the Appalachian ridge, we view upon the latter a vast country, where the abounding wealth of agricultural or of mineral and fuel products has built up a series of commercial cities and large trade towns. These may be mentioned in two classes—the first being the cities upon the verge of the Alleghany Mountains, and the second being further onward, in the valley of the Ohio and Mississippi and their affluents. In the first group we mention Pittsburg, Penn.; Wheeling, W. Va.; Columbus, Ohio; Frankfort, Ky.; Knoxville, Nashville, and Chattanooga, Tenn.; and the cities of central or western Illinois, and of the States of Minnesota, Iowa, and Kansas.

The second group comprises the cities upon the banks of the Ohio and the Mississippi from Cincinnati to St. Louis, St. Joseph, and Little Rock.

PITTSBURG.

This city is the Birmingham of America. Situated at the confluence of the two most eastern sources of the Ohio River, and in the midst of the largest coal-fields of the continent, Pittsburg has become a city of iron-workers. Its population amounts to 121,485. Its death-rate in 1873 was 26·5 per 1,000 inhabitants, and 51 per cent. of the total mortality was of children under five years of age.

Elevated 700 to 1,312 feet above sea level, and in a region cut and diversified with ravines and sharp hillsides, the city has some crowded and insalubrious quarters for its poorest classes. In those quarters cholera has again and again gained a foothold. Even in the summer of 1873 it was introduced from the southward, and destroyed several lives.

The Board of Health consists of the Mayor and Council, who appoint a chief Health Officer. These authorities are prompt and efficient in their duties.

CITY OF ALLEGHENY.

This outgrowth from Pittsburg is a separate municipality, with a population of 60,000. It is situated at the base and along the side of steep hills, partly within the deep ravines. Its death-rate in 1873 was 21 per 1,000 inhabitants. It is a city of iron-workers and mechanics, with large families of children.

The deaths of those under five years of age constitute 60 per cent. of the total mortality. It has a medical officer appointed by the Mayor. Its water supply is pumped from the Allegheny River into distributing reservoirs.

WHEELING.

Elevated between 625 and 850 feet above sea level, and subject to the endemics which most afflict valleys in high altitudes, this trade and manufacturing town presents sanitary problems similar to those of Pittsburg.

With a population of 25,000 and upwards, Wheeling has a death-rate of 16 to 18 in 1,000 annually. It has been repeatedly visited by Asiatic cholera, which is believed to have been introduced from the towns down the Ohio River, where it was already epidemic. In 1873 there were 21 fatal cases of that disease in Wheeling. The readiness with which malignant cholera and enteric fever spring into fatal prevalence in Wheeling has led the city to establish a vigilant sanitary government. As an illustration of this fact, the writer may here mention the fact that for the purpose of promoting sanitary information the chief medical officer of that city promptly forwarded to him, as a voluntary offering, a careful history of every one of the 21 cases of cholera which occurred there in the year 1873. The Mayor and City Council constitute the Board of Health.

Columbus, Ohio; Bowling Green, Ky.; Knoxville, Chattanooga, and Nashville, Tenn., and one hundred and fifty other smaller cities and populous places in the regions north of the southern boundary of Tennessee and Missouri, were visited by epidemic cholera during the summer of 1873. In each city and place thus afflicted the epidemic made known some one or more, usually several, glaring defects in the sanitary supervision of the place which suffered. The most conspicuous defects consisted in the failure to supply pure water from extra urban sources, the general use and bad condition of earth privies, and the filth-sodden and undrained condition of extensive areas in the places that suffered. The natural elevation, usual healthfulness, and opulent condition of the towns still left the chief centres of population or trade in the States of Kentucky and Tennessee open to invasion by cholera at a period when the Atlantic cities were enjoying entire immunity, for the course of this last epidemic was from New Orleans to Memphis, thence outwards along the chief routes of travel. The writer had records of the cholera, during its prevalence and soon after, from upwards of thirty towns and cities in Tennessee, and from

forty in Kentucky. The epidemic extended from New Orleans, where it appeared in February 1873, and spread thence northward through the States of the Mississippi and Ohio valleys, prevailing for a very brief period fatally in upwards of two hundred towns and cities.

This last march of cholera through the Great Valley has awakened new interest in the sanitary protection of the trade towns and cities throughout the entire region, for the truth is admitted that the local circumstances by which the disease spread and was rendered epidemic might have been prevented. The extra urban supply of pure water, thorough sanitary scavenging, the maintenance of good hygienic regulations, and the suitable sanitary policing of all crowded and uncleanly quarters, would have presented impassable barriers to the pestilence. The public duties thus indicated are receiving attention, and the visitation of cholera in 1873 has proved to be a more effectual sanitary inspection than any which medical officers have made in those towns and cities, for its fatal searching penetrated beyond the merely visible evils.

The sanitary government of the cities that were most afflicted with cholera in 1873 is of the most primitive kind. Even in Nashville, the capital of Tennessee, a city of 30,000 inhabitants, the people were wholly unprepared by any adequate form and means of sanitary government to resist the invasion and ravages of cholera. But the cities upon the Ohio and Mississippi present a more advanced state of sanitary organisation.

CINCINNATI.

Elevated 575 feet above the sea level, and being 1,600 miles from the mouth of the Missisippi, this city, with a population of 246,000, stands first in its sanitary as it does in commercial importance in the Ohio Valley.

The Board of Health of Cincinnati consists of six members, appointed by the Mayor and City Council. The executive service of the Board is conducted by a chief health officer and twenty-nine district physicians, together with an inspector of milk, and an inspector of meat and animals used for food.

The city being compactly built, and being locked by a ridge of steep hills upon the north, it suffers a high temperature in summer, the mean being 74° Fahr. in summer, 53·90° in autumn, and 53·70° in spring.

The death-rate at present and in recent years is at about 23 per 1,000 inhabitants, and between 44 and 46 per cent. of the mortality occurs in children under five years of age. The

death-rate is 50 per cent. less during its recent experience with a thorough system of drainage and sewerage than it was in the period previous to these sanitary improvements. Like all great commercial cities, Cincinnati finds that public health measures are measures of public economy.

LOUISVILLE.

Elevated 450 feet above the sea level, and 176 miles nearer the mouth of the river than Cincinnati, Louisville holds commercial and sanitary rank with the former. The various engineering improvements by which the latter city has been redeemed from endemic fevers have rendered it one of the most generally healthful of western cities, though Louisville once had a death-rate of nearly 100 in 1,000 inhabitants. It now vies with Cincinnati in its sanitary condition.

The registration of vital statistics is neglected by all the States and in nearly every city south of the Ohio and the Missouri, but we know, upon medical authority, that the rate of mortality has steadily decreased as the water supply from the river, the drainage, and the sewerage have progressed and overcome the endemic factors of disease.

INDIANAPOLIS AND EVANSVILLE, IND., AND DAYTON, OHIO.

These three cities have recently organised their sanitary government, and they have repeatedly suffered from epidemic diseases in consequence of defective drainage and unwholesome water supplies.

Each city now has an efficient Health Officer and an active Board of Health. The laying on of a good supply of river-water by force and the prosecution of drainage works have been attended by a steady and marked reduction of the death-rates, which in the year 1873, even with a sharp visitation of cholera, did not rise to 25 in 1,000 annually.

Numerous other new and rapidly growing cities in the States of Ohia, Indiana, and Illinois have laid out and begun to build upon vast areas of ground, without first draining and preparing the site of the future city. As the cities grow by accretion of inhabitants so the consciousness of such sanitary necessities grows. In a single instance—the first in America—the wealth and enterprise of an unhealthful city (Chicago) were successfully appealed to for the preparation and complete construction of a suburban town that should be completely outfitted for healthful and truly desirable residences. That suburban elysium was completed and offered to the people

of the great city at rents and fee simples most reasonable, but the dwellings remain untenanted, and its walks, parks, and drives seldom visited, while the city is rapidly growing outwards to them. The multiplication and growth of small municipalities in all the States east of the Mississippi is a striking phenomenon of civilisation in these States. They are the outgrowth of the restless commercial adventure and vast immigration that characterise the period.

ST. LOUIS.

This central city of North America has a site unsurpassed for the indefinite extension of its population and manufactures. Its trade commands a boundless river front from the mouth of the Missouri southwards along the western bank of the Mississippi.

Elevated 475 feet above the tide level of the mouth of the Mississippi, and being 1,270 miles from it, it is the first great commercial centre to the northward of New Orleans that can boast of entire immunity from yellow fever. That scourge has seemed to be harmless to St. Louis, however frequently its victims arrive sick and dying on steamboats or by railways, as they did arrive in the autumn of 1873, and frequently have before. The estimated population of this city is 450,000. Its growth is rapid beyond any precedents, except those of Chicago and San Francisco.

The sanitary topography of St. Louis would be healthful, except that the elevated plateau upon which the city is being extended westward, is dotted with ponds and saturated areas, which are held secure against all surface drainage by the eroded rock and its impermeable earth covering. Thorough drainage, therefore, is the chief sanitary problem of St. Louis, for the water supply of the city is pure and excellent when filtered.

The health government of the city is conducted by a Board, consisting of the Mayor and four appointed members, two being physicians. An executive health officer, a quarantine physician, the physicians of the City Hospital and the House of Correction are the chief medical aids of that Board. It is the only city in America in which the sanitary authorities have been authorised and required by the Municipal or State Government to supervise and treat the social evil of prostitution by medical and police agencies.

The city death-rate is not excessive, ranging as it does from 20 to 25 per 1,000 inhabitants yearly; but this city is capable of becoming conspicuous for salubrity and a low death-rate.

Its climate is mild; the mean yearly temperature being 55° Fahr., and its mean summer temperature being 76·10°.

Northward, westward, and south-westward, the new cities which have sprung into notice present the same sanitary problems that are illustrated in the group of cities last considered in this paper. Cholera has once or twice visited most of the new cities, and given its admonitions as a weird sanitary inspector. The ravages of that disease west of the Mississippi in 1866 and 1867 were alarming, and they at once aroused all of the more important municipalities into a salutary kind of activity to devise the means of sanitary protection.

The cities of Little Rock in Arkansas and of Hannibal in Missouri were reached by cholera in the summer of 1873; but they suffered much less than St. Louis, in which the sudden outbreak of that malady startled the sanitary authorities into a most useful activity.

THE CITIES OF THE ELEVATED PLAINS OF THE ROCKY MOUNTAINS.

The cities of St. Joseph and Jefferson in Missouri, Leavenworth in Kansas, and Omaha in Nebraska, present no new sanitary problems; for, like the other cities of the great River Valley, they grow by indefinite extension upon the plains beyond the original town sites.

Westward from Kansas, Arkansas, Iowa, and Nebraska, the new towns upon the elevated plateau near the axis of the Rocky Mountains offer some novel sanitary experience, and some highly important problems concerning the sanitary preparation and care of rapidly growing towns. For the most instructive example of such experience the cities of Denver in Colorado and Salt Lake City in Utah are specially worthy of mention.

DENVER.

Elevated 5,350 feet above sea level, and in a rainless atmosphere most of the year, the 25,000 inhabitants of Denver have found that an ample and trustworthy supply of pure water is the first requisite of health and safety in their city. The problem of sewerage and civic cleanliness is allied with that of the water supply. Guided by able medical men, some of whom are members of the City Council, the public works for providing the water supplies from the melting snows of the mountains in the spring, by a vast storage of reservoirs, have been devised, and at the same time a sewerage and cleansing system has been commenced.

In this elevated region the maladies most dreaded, and which have been most obstinate and fatal, are enteric diseases, and particularly the typhoid fever, and a continued fever which seriously affects the brain and nervous system. The copious water supply and a perfect system of domestic and civic sewerage are regarded as the natural means of preventing the prevalence of these fatal maladies. The over-crowding of domiciles and of narrow strips of ground, the excessive indulgence in alcoholic beverages, and the great want of home-life are sanitary misfortunes which will be less conspicuous in the next generation; for the forces of sound civilisation are at work in Denver, as in all the cities of Colorado. No city in America has moved with greater energy and intelligence to prepare the means of thorough sanitary protection.

SALT LAKE CITY.

Elevated 4,351 feet above sea level, this strange city, which, until the spirit of commerce aroused the inhabitants to a moral conciousness, was becoming decivilised by the presence of polygamy, has begun to take rank as a well-ordered town. Its population in 1873 was estimated at 26,000, of which 431 died. The official records show that 301 of the deaths were of children under five years of age. In this excessive mortality of its children, the Mormon city exhibits to all the world the proof of a vicious and deteriorating physical state of a polygamic people, which in the present and the last generation have come from the soundest physiological stocks of the human family in Europe and America.

SANTE FÉ.

This, like other towns upon the grand plateaux upon routes of mountain travel, has become a resort for invalids who seek a dry, rarefied, and cool atmosphere. Sante Fé has an altitude of 6,846 feet above sea level. It is the only city, except St. Augustine, Florida, of the old Spanish domain of a past century which, in the United States, retains the style and many structures of the creole Spanish period.

CITIES OF THE PACIFIC COAST.

From Astoria and Portland in Oregon to San Francisco in California the numerous towns which have assumed the form of a municipality in their local government have had to deal chiefly with the old duty of cleanliness of the crowded quarters in which fevers and enteric diseases threatened to become endemic. It will suffice to mention here the facts

concerning the sanitary government of the chief city of the coast.

SAN FRANCISCO.

Now a first-class commercial city, dividing with England the trade of the Oriental Pacific, San Francisco has become more mixed cosmopolitan than Hong Kong or Calcutta; and in the diversity and peculiar social condition of its population rest some of the difficulties in the administration of its sanitary laws and regulations. Its present population is estimated by the city authorities at 192,000. About 6·40 per cent. of the inhabitants are Chinese and Japanese. The American and European classes are of hardy stock. Family life and a sound social state have superseded the adventurous and nomadic life of a past decade. Already the young children (under five years of age) amount to about 13 per centum of the total population of California. The death-rate in San Francisco was 4·002 in 1873, and only 31 per cent. of the total was of children under five years of age.

The Board of Health of San Francisco consists of the Mayor, four physicians appointed by him, for subordinate officers of health have charge of the executive duties, and the chief is styled Health Officer, and is Registrar of Vital Statistics. His monthly records and abstracts are among the best in America.

New energy and support have been imparted to the treatment of the municipal sanitary wants through the agency of the State Board of Health. Exercising its functions of inquiry and suggestion, the State Board has faithfully instituted careful investigation into sources of harm to the public health, and has promoted the efficiency of the city government in regulating the crowded and least cleanly quarters. This has been a difficult task among the Mongolian classes, which acquire civilised habits slowly.

The Health Officer estimates the Mongolian residents of the city in 1873 at 11,000. The census of 1870 found 12,022 Chinese and a few other Asiatics in San Francisco. Though there are few women and children among these Mongolians, the rate of mortality which they suffer proves them to be feeble in constitution and generally less able to resist disease than the Caucasian race.

A city that has grown from a coast-trading post to the crowded port which San Francisco is, in the brief period of twenty-five years, must confess the want of some of the means of sanitary security. Deficiency of sewerage and complete house drainage is the greatest sanitary want of that city.

Enteric typhoid fever is much more frequent than in New York, but the ratio of deaths by pulmonary phthisis and from infantile maladies is less than in the cities of the Atlantic Coast. The zymotic causes of mortality, with the exception of specially contagious fevers, produce a far lower percentage of the total than in the Atlantic and interior cities. The zymotic causes, when faithfully classified and charged with all that is due to them, are found to have destroyed only about 23·5 and in the year 1873 only 17·9 per centum of all who die, and this fact seems to have had no exception, save in an epidemic small-pox; while New York and all the large cities of the Atlantic Coast and the Mississippi basin have from 29 to 35 per centum of their total mortality from this class of causes. The infant population is relatively greater in San Francisco and California than in any of the Eastern States, for nearly 13 per cent. of the total population in the former is under five years of age.

The cities of Sacramento and Oakland exhibit a record of vitality which vies with that of San Francisco; and from such testimony of vigorous infant life and of most conservative influences of climate and foods, by which the human organism is developed and fortified to resist the causes of disease, it is not difficult to perceive that upon the Pacific Coast of the United States man ought to, and probably will, attain the very highest physical perfection.

The European cities of the Mediterranean, the Atlantic, and the German Ocean, and the American cities of the western coast of the Atlantic, have no climate so invigorating, nor fruits and foods so profusely abundant, as San Francisco and all California southward from that city enjoy. The early institution of an efficient General Board of Health in the State, the enlightened activity of medical men as observers and instructors in matters relating to hygiene, the intermarriage of the most robust and energetic migrants from all civilised countries, the timely introduction of sound principles of school hygiene in the educational institutions, the substitution of manliness and womanliness for effeminacy, and the general popularisation of sanitary knowledge, now promise for the cities and the people of California examples of civic healthfulness, individual vitality, and power—bodily and mental—not yet attained in States which border upon the Atlantic. The leaders in hygienic improvement and in popular education in California are, in all probability, associating their efforts with more conspicuous results than could be expected in less favouring climates. From the City of Portland in Oregon to San Francisco, Stockton, and San Diego in the south, the

description which the Registrar-General has given of the healthy districts of England may justly be applied to nearly the entire region, and to the sites of the cities of the opulent portion of the Pacific Coast here mentioned.[1]

The fruits and vineyards, the cereals, and all that fields and forests can produce, the breeds of domestic animals, and all proofs which Nature ever gave of perfect beneficence to living beings, are vouchsafed to man in these regions of the coast and valleys of California. In the cities and towns of these regions, and in those of the Appalachian slopes, the healthiest of the human race in America will be found, for here are the 'Salubrious Fields.'

THE EXCESSIVE DEATH-RATE IN YOUNG CHILDREN.

The statistical statement which accompanies this paper exhibits the fact that the death-rate in children under five years of age is excessive in most of the cities of the United States. The general yearly statement of the rates of mortality in all American towns and cities, except where endemic fevers prevail, is governed by the ratio of infant mortality. Excepting in districts wherein endemic causes of fatal fevers or of tubercular phthisis prevail, the expectation of life after the tenth year is passed is probably higher in most of the United States than in cities in the same latitudes in Europe. The waste of infant life is believed to be greater in the American cities generally than in those of Europe, but there are numerous exceptions to this lamentable law of the early waste of human lives. These exceptions occur in towns and cities especially favoured by healthful altitudes, thorough drainage, and the best social conditions.

The excessive death-rate in children is an invariable fact in all over-crowded cities and portions of cities, and it seems to be an equally constant fact in over-populous families, and in the classes of families in which the propagation is physiologically too rapid. The labouring classes in the cities of New York, Brooklyn, and Boston exemplify this fact, as well in the separate families as in the crowded tenement blocks, though in enormous excess in the latter localities. The polygamist Mormon communities of Utah illustrate by the most ignoble and shocking examples the greatest destruction of infant life that has ever been witnessed since Herod slaughtered the innocents of his realm. Bestial license in Utah has produced a waste of life not less culpable than Herod's. The children under five years

[1] *Report of the Registrar-General on Cholera*, pages xcv. and xcvi.

of age in that territory constitute 19·23 *per cent. of the total population, but* 70 *per cent. of all deaths are of infants under five years.*

Thus, in the same nation, in cities of nearly the same latitude, is witnessed the instructive view of the chief causes which destroy three-fourths of all the child-life in particular classes and conditions of the inhabitants, while in other classes, conditions, and places more than two-thirds and even three-fourths survive and pass the first ten years of existence in safety.

The tropical heat which prevails in most of the large cities and throughout the Mississippi Valley and the Atlantic slope southward from the 43rd parallel of latitude, during the greater portion of the summer quarter, must be taken into the account of causes of excessive mortality in young children. The accession of this summer intemperature is so sudden that it is soon followed by morbid conditions of the digestive functions and of the nervous system in children under three or four years of age, excepting when skilful care and the best adaptations which can possibly be devised for meeting the suddenly-changed conditions are provided. The poor and ignorant classes utterly fail to make such provision in the crowded and treeless cities. Their infants perish. But in the cities of San Francisco, Sacramento, and Oakland, on the Pacific coast; Baltimore, Philadelphia, and Washington upon the Atlantic front; and in San Antonio, Texas, and New Orleans, Louisiana, we witness so great a degree of saving of child-life under five years old, that the causes which lead to such saving well deserve inquiry. Climate and the modes of domicile have a large share in these causes, so likewise may the wide distribution of families and certain favouring conditions of maternal life. The experience of English cities is repeated in those of America, where the Liverpools, Newcastles, and Leicesters of the New World add to the causes prevalent in England the ruling circumstance of sudden and tropical intemperature, which, in the absence of adequate natural aids for protecting infant life, makes a deadly havoc in all the crowded, uncleanly, and unventilated quarters.

The cities and towns of the Pacific coast afford the highest security to child-life that has been witnessed in America. Baltimore, Philadelphia, Washington, and the most opulent of the inland cities upon high altitudes are next in the order of healthfulness generally and of favour to infant-life. The diversity and physiological influences of causes which upon the one hand save the lives of children, and the causes upon the other hand which destroy half the children before their fifth birthday, now begin to give some degree of cleanness and certainty to sources of

infant mortality which operate so fatally in cities and towns. Plainly enough the problem of preventing the waste of infant-life involves, from the first, numerous other great problems, and chiefly :—

1. The sanitary improvement and regulation of cities and towns, in respect of drainage, cleansing, and domiciling;

2. The improvement of the social and material circumstances of the largest possible numbers, especially among the labouring classes;

3. The improvement and protection of human vitality by the resources which a correct knowledge and application of physical and moral truths afford.

In America these problems are receiving attention, and it is seen that the climate and constitutional vitality in California are recognised as savers of children; that social and domestic improvements, with a wide distribution of families, in Philadelphia, save thousands of young lives that would perish in New York or Chicago; or that in New Orleans, where, previous to the year 1861, and before drainage and sanitary police were extended over the city, the infants perished at the rate of 280 (under one year old) to every 1,000 born yearly, now, under the reign of improvements to which reference has been made, and as a recognised result of the public works, the infant life at that age is lost only at the rate of 19 in every 1,000 born in the year; while in the cities of New York, Boston, and Chicago, with all these local improvements more nearly perfected than in New Orleans, but with domiciles more and more crowded, the infants under a year old perish as before the improvements, and the mortality of children under five years of age continues to be almost equal to that of the earlier period, and gives rates like those of the child mortality in Glasgow, Liverpool, Paisley, Birmingham, and Leicester.

The sanitary officers of these American cities are dealing with the same problems as their brethren are dealing with in the cities and towns of Great Britain.

SANITARY STATE OF THE FOREIGN-BORN CLASSES IN AMERICAN CITIES.

The last national census shows that nearly one-half of the adult population in the larger cities of the United States were of foreign birth. Health authorities in New York and the chief cities find that the adult portion of the inhabitants of the crowded tenement streets and the tenement houses of the grosser kind are mostly of foreign birth. On the other hand, the opulent classes of foreign-born inhabitants display most

enlightened home truths in a strong preference for suburban residences.

The families of foreign birth, particularly females of such origin, have more children than any class of the native population, except in some of the north-western States. The home life and its hygienic surroundings, which emigrants to American shores most need, they do not usually seek. Yielding to the instinctively gregarious tendency of his race and the fatherland, the Celtic and the Teutonic emigrants have inevitably gravitated into the cities in greater numbers than they should for any high and permanent interests of theirs. The tenement houses of New York are vast hives of the foreign-born, who, like the swarming bees, still move in dense clusters, only to suffer the penalties of unhealthful habitations and harmful proximity and eventual alliance to evils, both physical and social, which could be wholly avoided in suburban and rural life. Every American city affords ample facilities for the wider dispersion and healthful residence of foreign and native alike who may elect to seek fortune and home in and near the cities. But when once a family has sunken its domestic individuality in the drift of the congregate dwellings or tenement houses of crowded streets, the noble expectations and desires which inspire hopes and resolutions for the true rewards of industry are gradually lost in such an environment of evils. Thus the tenement houses of New York are now crowded with half a million of people who should desire and could deserve and enjoy better homes.

If there is any one word of suggestion and counsel which the emigrant families from Europe to the United States need more than another, it is, *to seek and establish a separate home in the most healthful place.*

NOTE UPON THE ORGANISATION OF SANITARY GOVERNMENT AND THE METHODS OF SANITARY ADMINISTRATION IN AMERICAN CITIES.

In nearly all of the United States the type of the State or the national government is found in the primary assemblies and authority of the municipality and the rural township. From this primary source of power are derived the rules and regulations which citizens acquire for the protection of the health and peace of their homes and neighbourhoods.

Until quite recently nearly all laws and regulations relating to the public health have been left to varying preferences and still more widely varying degrees of knowledge of the separate communities, that is, to the authorities of cities and

townships, undirected by general laws. The laws and regulations of quarantine of ports have been the chief exceptions to this principle, for the latter are directed under general laws in each maritime State. But now, in the spirit of general progressive social duties, and the measures necessary for protecting human life, with greatly augmented populations in the cities and large towns, most States of the Union have entered upon some general as well as local legislation to extend to cities, townships, and villages the definite powers they need for organising and executing sanitary regulations. In six of the States a general or State board of health has been organised under acts which confer some authority, and entail important duties of inquiry and advice. In most of the States such a general board of health will soon be organised, and it is believed that the supervision of the registration of vital statistics will be mainly committed to these State boards, and that, like the Medical Department of the Privy Council of England, it will initiate the most important sanitary inquiries. The six boards already organised have procured the efficient organisation and action of local boards of health, and have awakened great interest in the principles and application of sanitary science.

Already the expert physician, the chemist, and the sanitary engineer have become the publicly recognised exponents of sanitary science and the duties it imparts; and while the supervisor and civil justices in towns, and the mayor and councilmen in the cities, constitute the nominal board of health, except where special acts of the State legislature have provided otherwise for a board, these American 'burgomasters' now call to their aid such experts as they can find. Thus progress is being made in the sanitary government of the chief towns as well as in the cities.

The areas of sanitary administration are being enlarged, and, as noticed in regard to the annexed area of New York City, of Boston, Jersey City, and Chicago, the sanitary and commercial interests of the inhabitants of any city, to its outermost circumference and continuous suburb, prevail over the merely political or partisan strife and selfish clamour for the autonomy of old boundary lines and separate municipalities, so that three, four, and even five cities lying contiguously to each other are readily united into a single city by the popular ballot under the sanction of the legislature. This willingness and determination of such separate municipalities to become welded into one city for the sake of permanent and desirable improvements in the sanitary and general police system, and

for unity and efficiency of government upon extended areas that are naturally joined in one common interest, has never been so conspicuously witnessed in other countries. It is a token of much good for the future of sanitary administration.

The present is a transitional period in the methods, the form, and the powers of sanitary government in the cities and States of North America. The writer will endeavour, in a future and supplementary statement, to give some useful records and particulars concerning the sanitary history and condition of the cities of the Dominion of Canada, of Mexico, and the States of Central and South America, and of the vital statistics of these countries. The foregoing pages present the leading features of the sanitary administration and public health questions in the cities of the United States, though only the most typical cities, methods, and results are here described, in the belief that these brief descriptions may suffice for the whole number of cities and States. From the foregoing statements it is obvious that the great sanitary problems of the cities of the Old World are the great problems of the New World.

On Legislation for the Restraint of River Pollution.[1] By Major-General H. Y. D. Scott, C.B.

AN apology for this paper, if one be needed, is to be found under the head of 'The Sanitary Laws' in this year's Report of the Council of this Association to the annual business meeting of its members. The Report states that—

'The great question of the best means for the ultimate disposal of sewage has remained in abeyance during the past year. Little or nothing has been done; and the difficulties attending the best mode to be adopted, and the means to be provided for acquiring the necessary land for irrigation, filtration, or other means of deodorisation and defecation, remain untouched and unsolved.'

This statement affords good reason for making some attempt at progress during the present session of the Association, and the moment appears not unfavourable to it. A public meeting called by the Fisheries' Preservation Association, on June 11 last, passed resolutions that an endeavour should be made to obtain legislation in restraint of the pollution of rivers, and the Prime Minister was asked to receive a deputation on the subject. Mr. Disraeli, owing to the pressure of business, was

[1] See *Transactions*, 1872, p. 331.

unable to grant a personal interview to the gentlemen deputed to communicate with him, but stated that—

'The several resolutions passed at the meeting shall receive his most attentive consideration, more especially as the subject is one in which he takes much interest.'

I shall now, therefore, proceed to state my views on the extent to which legislation on this subject should be carried, and explain my reasons for holding them, in the hope that the Society for Promoting the Amendment of the Law, which is united with this Association, may give their attention to the question, and strengthen the hands of the Fisheries' Preservation Association in their good work.

Whilst fully persuaded that, in inland towns at least, irrigation or filtration through large masses of earth will prove to be the most satisfactory means that can be adopted for the ultimate purification of sewage, I entertain a strong conviction that it would be a serious error, in the present condition of the question, to force its adoption universally; and indeed I doubt whether it should be made compulsory in any case until greater experience of its effects than we at present possess has been gained. So long as it is possible that the House of Commons may upset, as in the Birmingham case, well-devised measures for irrigation, on the representation of the injury that might be inflicted on landowners, the country cannot be looked upon as being ripe for insisting upon the complete purification of sewage water. The strong advocacy of irrigation which we have witnessed during recent years has, indeed, proved a serious obstacle to progress. A wide jump has been attempted where stepping-stones would have afforded a safer and shorter mode of surmounting the difficulty. This view of the question is advocated in an article in the *Engineer*, on July 29 last, with reference to the proceedings of a deputation from Kingston on-Thames, Surbiton, and Hampton Wick:—

'The deputation remarked that "irrigation had been recommended," but owing to the difficulty of obtaining land they could not carry out such a project satisfactorily. Some reason shows itself in this argument. . . . . The Commissioners proposed irrigation. Theoretically, they were right; but practically, the world was little the better for their advice. . . . . Where will the towns find their land? How has Birmingham fared in this matter, and what has been the conduct of Parliament. . . . . But what do these gentlemen mean when they say that "owing to the difficulty of procuring land they could not obtain effluent water of the standard required by the Thames Conservancy." It would

rather appear to us that there is some mistake here. Setting aside the question of utilising the sewage, there is surely some possibility of defecating it. If the so-called "standard" of the Thames Conservators cannot be reached, is that a reason why absolutely raw sewage should flow into the river day by day? If the towns were really to set to work and do something, the probability is that they would obtain an effluent water which would immensely benefit the stream. The sewage question is thrown back by this bogus of a "standard." Towns are doing nothing because they cannot convert the foul liquid of their sewers into a crystal stream so pure in its character that it will probably excel the stream into which it flows. There are means and appliances by which sewage can be shorn of all its positively repulsive features, and all the effect of Royal Commissions and Acts of Parliament seems to amount to this—that we are not to do what we can, but are to contemplate that which we cannot do.'

It is not, however, correct to assume that Royal Commissions have proposed irrigation to the exclusion of all other modes of dealing with sewage. There is undoubtedly 'a mistake here,' into which local authorities are only too prone to fall when an excuse is wanted for doing nothing. The early Reports of the Royal Commissioners to inquire into the best mode of distributing the sewage of towns point out clearly what may be reasonably expected to be done, without reference to irrigation, for the amelioration of the condition of rivers, and state the grounds on which the Commissioners make their recommendations.

'The chief part of the nuisance arising from the discharge of sewage into rivers and streams may be obviated by simply arresting the solid matter in suspension in the liquid, for that by far the greater part of the solid matter which is held in suspension in water is readily deposited in rivers, covering the banks with mud, permanently raising the beds, gradually destroying the scouring power of water, and partially silting such rivers up; and that in some instances these deposits have accumulated to such an extent as to impede navigation, to render the surrounding country subject to floods, and to entail a vast expense in periodic cleansing; that, however, the appearance of the water may be improved after these deposits have taken place, yet the deposited matters lying in the bed of the current are under conditions favourable for putrefaction, and when the foul mud is disturbed, by the prevalence of rain and during floods, it sends forth its effluvia amidst the populations which are near, and even in the course of the rivers far distant.'

'This condition of rivers,' they say, 'has been a public and

national nuisance; it interferes with the convenience and comfort of all classes of the people; it damages various and important interests, as those connected with manufacturing establishments, canals, fisheries, and so on; it deteriorates property to a large extent, and, as interfering with a main source of water supply, is of serious importance to the public health.'

If 'the chief part' of such evils as these is to 'be obviated by arresting merely the solid matter in suspension in the liquid,' why should so simple an expedient have been so long neglected? Is it not, indeed, intolerable that local authorities should for the last sixteen years, with this Report before them, have persisted that they are at a loss how to make any improvement?

Nor is this all the information Royal Commissions have given us on this point. The Report dated March 26, 1858 (and signed amongst other authorities by a distinguished Vice-President of the Health Section of this Association, Mr. Rawlinson), also explains in what manner the solids may be most cheaply, easily, and inoffensively removed.

'The use of lime to separate the solid matters of sewage is founded on the following circumstances:—Sewage of itself, from the slimy glutinous character of the matter floating in it, and from the specific weight of that matter being so nearly the same with water, will only separate very imperfectly, and after a length of time, into a clear liquid and a solid deposit. The addition of lime, however, by the chemical changes which it induces, but which we need not here describe, causes a separation of the solid suspended matter in a state of flocculence, in the same way that white of egg clears coffee or isinglass fines beer. The result is that the sewage rapidly changes its character, separating readily into a deposit which falls to the bottom, and a clear liquid.

'Without going so far as to say that the precipitation by lime is a perfect success, or that it can in all cases be adopted, we feel satisfied that it does to a great extent fulfil the purpose for which it is employed, so far, at least, as the purification of rivers is concerned.

'By far the largest amount of nuisance and danger arising from the pollution of rivers by sewage is due to the solid suspended matters, which give off noxious effluvia throughout the period of their decomposition. This is especially the case in our tidal rivers, where these deposits form shoals and cover the banks, and at low water offer a vast surface of offensive matter for the contamination of the air. The lime process does effectu-

ally remove this solid suspended matter, and in so far accomplishes a great and manifest good. It also destroys the immediate influence of the noxious gases of sewage, and although it may in the abstract be open to the objection of still leaving matter capable of further putrefaction in the liquid, we are of opinion that wherever this liquid is thrown into a body of water considerably larger than itself no evil results will practically be experienced.

'Our conclusion, then, is that in the absence of the means for the direct application of sewage to land, the methods of precipitation at command do actually offer remedial measures of a very satisfactory character.'

It is no uncommon thing for local authorities, whilst admitting that they could remove the solids from their sewage, to throw the blame of their inaction on the difficulty of deciding between the various promising schemes suggested for disposing of the matters extracted; but the Report already quoted declares that none of them are promising in the sense aimed at, viz., commercial advantage:—

'We may at once state our belief that, as far as present knowledge goes, this very simple process offers as much prospect of commercial advantage in respect to the manufacture of a solid manure from sewage as any patent process that has been proposed.

'But with reference to the prospect of obtaining any very large profit from the treatment of sewage, we see no reason to dissent from the view that has been individually held and promulgated by several of our members, that neither the lime process nor any other existing method of precipitating sewage is likely to be commercially advantageous to those who engage in it. We consider that this is, however, not the light in which the matter should be viewed. The great problem is to get rid of sewage, advantageously to agriculture if it may be; if not, at the least expense to the community at large.

'Throughout the discussions that have hitherto occurred upon this question the real issue has been left comparatively in abeyance. The primary consideration is, not whether the sewage can be made serviceable to agriculture, but whether or not there exists any method which, consistently with a fair expenditure of money, falling on those who ought in justice to bear it, will practically rid us of the nuisance and danger attendant upon town sewage.'

They conclude their Report thus:—

'We have already stated our belief that, unless some new process of greater efficiency should be discovered, the forma-

tion of a solid manure from sewage will not be remunerative; that is to say, that the amount realised by the sale of the manure will fall short of the cost of its production. Neither is this to be considered as a condition dependent on want of appreciation of the manure, which time and better information on the part of the consumer will remove; on the contrary, the tendency has been hitherto to put the price above the value which a sound acquaintance with the nature of manures would attach to it. It is even questionable whether, in some instances, any money at all would be given for this deposit, and in considering the practicability of carrying into effect plans for the precipitation of sewage we must be prepared for this eventuality.'

The accuracy of these statements has been corroborated by the later Reports of the Rivers Pollution Commissioners, by the leading agricultural chemists of the day, and by actual experience. To delay action until a salable manure can be made out of ordinary sewage deposit is, in fact, to postpone indefinitely the cleansing of our rivers, and if there be truth in the following observations by the Royal Commission on Distributing the Sewage of Towns, the valueless nature of the product affords no valid grounds for remaining inactive:—

'Expedients for the purpose of depriving the sewage of its offensive and noxious properties have been brought into practical operation, and have been attended with more or less success.' 'The more this subject has been investigated the more convincing is the evidence that there is no town which might not, with reasonable care and at moderate cost, greatly mitigate the existing evils, where it may not be practicable wholly to remove them.'

With such evidence before us, it is absurd to assert that local authorities are without guidance, and to argue that, because they cannot be sure whether this or that would prove the more economical method of dealing with their sewage, they should be allowed to sit with their arms folded, and wait for something to turn up to relieve them of the cost of doing what they ought to set about at once. A Mayor in the West of England lately published a pamphlet in which, referring to the difficulty of disposing of sewage sludge, he naïvely says: 'I would urge the policy of waiting *for a little longer* (the italics are the worthy Mayor's); *at all events, for the result of experiments which others are making.*' It is, however, but fair to state that the Mayor wished to commence at once to 'disinfect and deodorise' the sewage, though he does not explain the mode in which he would accomplish these objects.

But it is often argued that the remedy will be worse than the disease; that the nuisance created by deposits from sewage will lead to injunctions against poisoning the air, and that on the whole it will be safer to continue to poison the rivers. There is, however, sufficient evidence to show that these fears are groundless. The Commission on the Distribution of the Sewage of Towns arrived at the following conclusion upon this point, viz.:—

'That, considered merely as the means of mitigating a nuisance, these precipitating processes are satisfactory; that the cost of them in any case is such as town populations may reasonably be called upon to meet; that the necessary works need not, if properly conducted, be a source of nuisance; and that by modifications of the existing methods even the slightest risk of nuisance may be entirely obviated.'

This was written in 1858. In 1872, in the Parliamentary inquiry on the Birmingham Sewerage Bill, Dr. Frankland, one of the Rivers Pollution Commissioners, is asked:—

'Would there be any nuisance caused by the depositing process and the use of chemicals?'

And he replied:—

'I should apprehend no nuisance whatever if lime were employed. . . . . The lime deposit and the sludge collected from the sewage of Ealing, although I had a quantity thrown upon the ground before me, were absolutely inodorous.'

Again, at the same inquiry, Dr. Voelcker is asked:—

'Do you think they (the suspended matters) may be removed in a form that they may be made into cement or dried manure without causing a nuisance there?'

He replied:—

'I know that it can be done, and it has been done at Ealing.'

Moreover, further and complete proof of this can now be obtained by any one who will take the trouble to visit Birmingham, where considerable quantities of sludge are being continually dried in the open air without annoyance to anybody. Before the lime process was used the results, it is true, were very different. The sludge then proved to be what Mr. Hawksley called 'a very abominable thing;' it caused such a nuisance that Dr. Letheby 'could hardly endure the smell;' and Mr. Hope said, 'It stinks worse than anything I ever smelt out of Constantinople.'

Except, therefore, in small country places, it would manifestly be advisable that provision should be made not only for compelling the removal of the solids from sewage, but for

their deodorisation by lime, or some other equally efficacious means.

In considering whether legislation should be carried further than to make it imperative to remove the solids from sewage water, it must not be forgotten that the use of precipitants secures the triple advantage of complete precipitation of the suspended matters, the more or less complete deodorisation of the deposit and the liquid effluent, and the removal from the liquid of more than one-half of the dissolved nitrogen, which is its most offensive element. The Rivers Pollution Commissioners found by trial, at Leicester and Stroud, that precipitation produced the following diminution of the highly putrescible nitrogenous ingredient in the sewage of those places:—

Percentage of Organic Nitrogen Removed.

Lime Process	A B C Process	Sulphate of Alumina with filtration through charcoal
60·13	54·46	52·0

The case then in favour of compelling towns to remove the solids from sewage before casting it into rivers is very strong, and the reasons for deodorising it by precipitation with chemicals are weighty; but if it can be shown that these processes are the best, and, indeed, a necessary preliminary to irrigation and cleansing by earth filtration (to which all those who have studied the subject with unbiassed mind look as offering the most hopeful and final solution of the sewage question), the argument for legislation to this extent will be irresistible.

The eminent sewage farmer, Mr. Hope, says:—

'It is because, in my judgment, sewage irrigation cannot be carried out from the utilisation point of view without storage tanks, that it becomes necessary to deal in some way with the sludge, because if you store you cannot avoid deposition. I am prepared to go further, and say that, as irrigation with sewage containing the whole of the sludge causes much more smell than irrigation with sewage out of which the whole or a portion of the sludge has been taken, there are many situations where the extraction of the sludge ought to be compulsory, simply because in a country thickly studded with villas and country houses I do not think that any man has a right to offend the noses of his neighbours.'

Again, in reply to questions put to him at the Birmingham Sewerage Bill inquiry, Mr. Hope gave the following evidence:—

'Do you provide for the exclusion of the ordinary excreta? . . I altogether approve of taking the sediment from the sewage. . .

'But with regard to the sewage of Birmingham, on the whole, it is really neither one thing nor the other (that is, "not irrigation and not wholly filtration")?—I think it is very much the same as every other sewage scheme must be. As to the solid matter, it must be taken out.

'You see that you thought of the enormous strain (upon the purifying power of the land) at that time (11th September, 1871)?—Yes.

'. . . At that time, at any rate, you thought that, as a matter of course, a few years would produce an excess of organic matter in the filter?—I should be of the same opinion now, if it was proposed to run sludge on to the surface of the land.

'What do you mean by sludge?—Sewage sludge.'

Dr. Letheby, at the same inquiry, stated that—

'Sewage run upon land without being previously defecated by chemicals will be a nuisance wherever it is put on.'

And being asked—

'May I take it, therefore, that you lay it down before the Committee that the proper way of dealing with the sewage would be, in the first place, some chemical process of defecation to separate the suspended matter and some portion of the matters in solution, and then use the land as a filter for further purifying the sewage?'

the reply was—

'I believe that is the right thing to do.'

Mr. Hawksley, questioned on the same point, replied thus:—

'Now, my friend will ask, if I do not, whether you will venture to say that that process can be carried on over this land without any nuisance?—I am certain of it; if you kept off the untreated sludge, which is very offensive.

'You have said that sewage, when it is poured upon the land without any preparation of this kind, does make a great nuisance. You have often said that?—Yes; the nuisance varies in degree, according to the state of the weather, the comparative amount of water with which the Sewage becomes mixed. . . .

'. . . If they ask me what in the abstract I think the right thing, I tell them decidedly that a method of precipitation, or a mixed system of precipitation and filtering, would answer the purpose.'

One of the chief objections which have been made to sewage irrigation from the sanitary point of view has been the enormous area of land which would be required to purify the sewage of our large towns; on this account, if for no other, it would appear, from Mr. Hope's evidence just given, that previous removal of the suspended matters is desirable, and the same opinion is held by other eminent authorities.

The Rivers Pollution Commissioners say, in their fourth Report:—

'We demonstrated in our Report on pollution arising from the woollen manufacture (1871), vol. i. p. 33, that very foul waste liquors from woollen dye-works can be efficiently purified by intermittent filtration through earth, at the rate of about one gallon per cubic yard of earth per 24 hours. But this is a very slow rate of filtration; and we expressed a hope that it might be considerably accelerated by mixing the liquor with a small quantity of slaked lime before allowing it to flow upon the filters. This anticipation has been realised; and we have been able, as the following analytical results show, to purify approximately six times as much of the limed as of the unlimed liquor per cubic yard of earth.'

Dr. Frankland gave evidence before the Birmingham Sewerage Select Committee to the effect that much less land would be required if the sewage was previously chemically treated, and Dr. Odling, examined on this point, made answer thus:—

'Would the precipitation in those tanks allow the water to flow on in the remaining portion of the conduit to a great extent clarified and purified?—Yes; it would be both clarified and (in the sense of no longer smelling) purified.

'In your opinion would any nuisance arise from taking the water so clarified on to the land?—Certainly not.

'If your view is correct, and these experiments are correct, why is it to deposit at all; it ought all to go on to the land, ought it not?—No, certainly not; we are talking of passing liquid containing organic matter through land. If, in addition to that, it contains a large amount of suspended matter, which will deposit upon the land, you will rquire a very much larger area of land. I should say that it would be quite impossible to do with this area of land if you put the sewage fresh upon it, and allowed the suspended matter, which is intended to deposit in the tanks at Dunton, to deposit upon the surface of the land.

'It is only by taking out previously a certain amount of nastiness in the shape of sludge, and getting it to deposit, that

you can do it at all?—It is only in that way that you can do it on such an area as this inoffensively.'

But the strongest evidence in favour of preliminary precipitation was given by Dr. Voelcker, the most practised of living chemical agriculturists. He states:—

'The chemical precipitation of the sedimentary matter, which is of very little agricultural value, removes the impediment in the application of sewage to the land, which is so great that many farmers, who I have no doubt would use the clarified liquid, will not use the raw liquid on account of the sedimentary matter which forms a deposit, choking up the pores of the soil, and therefore in a great measure neutralising the fertilising effects which the substances in solution would otherwise produce.'

Here then we have the greatest authorities on the subject (agriculturists, chemists, medical men, and engineers) all concurring in recommending as a preliminary to the ultimate and complete purification by land the very process which Royal Commissions have declared to 'offer remedial measures of a very satisfactory character.' What possible objections, then, can town authorities have to offer to the adoption of a precipitation plan, or at all events of a subsidence system, excepting those suggested by fear of increasing the rates? The argument that they do not know the degree of purification which may hereafter be required of them has little weight when it is seen that some method of removing the solids, which cannot be accomplished without depositing tanks, is the first thing to be accomplished in any case. And the Government might, without any fear of having to retrace its steps or modify its decisions, confidently make a stand here and enact that, excepting in heavy thunder-storms, *no sewage shall be cast into any river or stream if it contains in suspension more than a certain amount of matter per gallon.* Might it not safely go so far as to adopt the decision of the Parliamentary Committee on the Birmingham Sewerage Bill, and enact that, in the vicinity of dwellings, '*no sewage be put upon any land without having been previously defecated in tanks?*'

This would compel the adoption of either precipitation or irrigation and earth filtration, or both, and the stumbling-block of a standard which cannot always be attained will be done away with. It should be borne in mind, too, that though irrigation is, when well carried out, a complete remedy, perfect management cannot always be secured in practice. In such cases of failure the previous precipitation proves an important safeguard. Sewage farmers, even with severe penalties before

their eyes, will certainly turn the sewage into the nearest brook when their land is in danger of being water-logged in wet weather. They will run the risk of detection and possible penalty rather than encounter a certain evil in the loss of their crops. And even if farmers could be relied on to do their duty, other causes of failure intervene. We read in the Reports of the Rivers Pollution Commissioners that, at Banbury, 'the soil tends to crack in dry weather, thus giving the sewage direct access to underground drains, and thence to the river, before it has been properly acted upon by the soil.' They found that, at Norwood, the 'removal' (in the month of January) of offensive nitrogenous organic matter was partially arrested, 'and indicating that during a severe winter the purification of sewage upon a non-absorptive clay soil may be seriously interfered with.' They found, also, 'exceptionally impure water' from the Norwood farm at other periods of the year, and at Croydon, as at Norwood, during frost the purification 'became markedly impaired.'

Now, to provide against such cases preliminary clarification would be a valuable adjunct, and for the reasons given it might, as I believe, be enforced, without hardship, in all cases in which purification of sewage by irrigation would be liable to create a nuisance, as well as in cases where irrigation is not adopted.

To insist on more than this, considering the extent to which the Government is itself implicated in the production of the evils which have accompanied the water carriage system, would certainly be impolitic and perhaps unjust. A high standard of purity can only be attained, in the present state of our knowledge at least, by irrigation or some modification of it, and suitable land for the purpose cannot always be attained, or can only be obtained and utilised at a ruinous cost. Moreover, any legislation which aims at too much will merely prove a dead letter. The experience of Birmingham shows how little the public mind is prepared for a comprehensive scheme to be carried out on land purchased by compulsion.

In this case almost every man of eminence who could throw any light on the subject was consulted. A singular unanimity prevailed amongst the advisers as to the course which should be adopted. The plans proposed commended themselves to every unbiassed man who made himself acquainted with the evidence. A Parliamentary Committee patiently investigated all that could be said upon the question, and approved the Bill. If the House of Commons had had the same opportunity of forming an opinion as their Committee they would probably

have concurred in the decision, but an unwillingness to interfere with existing rights prevailed, and the best Sewage Bill ever prepared was thrown out. The country is, in fact, not prepared for compulsory irrigation, even if carried out with all the precautions which science and experience can suggest.

This contest cost Birmingham some 15,000*l.*, but it will probably save the town from the heavy expenditure which the success of their Bill would have entailed. It has afforded also an undeniable proof that large towns can clarify their sewage and get rid of the deposit without a nuisance, and without entailing a heavier expense than they can reasonably be called upon to bear. The Law Courts have appreciated the earnest attempts which the town has made to get rid of the nuisances caused by its sewage, and no longer rigorously press the injunctions brought against them. That which Birmingham would have done if it had been permitted to carry out its scheme could not be accomplished by all towns; that which Birmingham has fallen back upon is a first step towards a more perfect compliance with sanitary requirements, and might fairly be exacted in every case in which the outfall communicates with a river or stream.

In bringing this subject before the Association I have for obvious reasons made use, as far as possible, of the Reports of the Royal Commissions upon it. It is to be presumed the different Governments which appointed them had some intention of carrying out their recommendations, and such recommendations are entitled to the best consideration of the Ministers now in office. It is to be presumed, also, that these Reports are in the hands of all those really seeking information and guidance; and it is well that special attention should be drawn to the passages I have quoted. Municipal authorities will therein find:—

1st. That 'a great and manifest good' will be effected, and 'the chief part of the nuisance arising from the discharge of sewage into rivers and streams may be obviated by simply arresting the solid matter in suspension in the liquid.'

2nd. That in the removal of the solids 'even the slightest risk of nuisance may be entirely obviated,' and the condition of the effluent much improved, by the adoption of a process of precipitation.

3rd. That these objects can be secured 'consistently with a fair expenditure of money, falling on those who ought in justice to bear it,' and at a cost 'such as town populations may reasonably be called upon to meet.'

4th. That towns which are intending to resort to irrigation and intermittent downward filtration will, by the adoption of a precipitating process, purify the sewage on a much smaller area. And when to these considerations is added the following:—

5th. 'That sewage irrigation cannot be carried out from the utilisation point of view without storage tanks,' and that the liquid is, in the generality of cases, preferred by the farmer when freed from solids and slimy compounds—it becomes difficult for towns to show just cause why they should not be peremptorily and at once restrained from the further contamination of rivers by the sedimentary matters of sewage.

In conclusion, let me ask this question:—Since the simple measures recommended by the Royal Commissioners will 'greatly mitigate the existing evils' (I use their own words); 'practically rid us of the danger and nuisance of town sewage,' may we not reasonably hope that a Ministry which has promised sanitary legislation will listen to an urgent appeal to have these measures enforced? There would be no necessity that legislation should altogether stop at this point. When all the offending towns in the country have been compelled to comply with a low standard of purity, a higher one may be attempted with some chance of success. To insist upon absolute, or nearly perfect, purity now would end in leaving matters as they are.

Excremental Pollution—its Remedy, and Suggestions generally in connection with the Drainage of Towns. By ADAM SCOTT.

'DIVIDE and Conquer' is the motto of the system which bears the name of Captain Liernur, the eminent Dutch engineer, a system which professes by division of labour to solve entirely the sewage difficulty, into which so many of our English towns have fallen. It is a comprehensive system for the drainage of cities, and has four subdivisions, which I shall describe as briefly as possible. As there is no book in the English language that gives such description, I think that it is not out of place to put upon our records an outline of a method of drainage which, on the Continent, has created a literature by itself.

The elements with which a proper system of drainage has to deal are—

1st. Roof and street water.

2nd. Subsoil water.

3rd. Waste water from manufactories, including all water dirtied in the process of any trade whatever.

4th. Human excrement, including chamber-slops, which find their way into closets.

5th. Sink and bath water.

As to the *subsoil* water, the recent discoveries of Continental science show an intimate connection between the rise and fall of this water with the rise and fall of certain epidemic diseases. As the strongest masonry sewers cannot prevent *percolation*, it follows that they cannot resist *infiltration*, and thus they practically form drains for receiving subsoil water, thereby exposing to the action of the atmosphere at a great depth the befouled soil in which the sewers lie. Hence the necessity of some arrangement for keeping the subsoil water at a permanently low level, as effected by Captain Liernur.

Treating, then, of the first two divisions, rain, street and subsoil water, we find that Captain Liernur drains the last-named by means of ordinary porous agricultural drainage-pipes, laid at such distances apart as best suits the nature of the soil to be drained. Preferably these are placed so as to keep the level of the subsoil water just below that of the lowest cellars in the town, but they can be placed in such a position as may be thought best by the health authorities. These drain by means of a syphon connection into the lower lying rain-water sewers. Above the syphon and reaching to the pavement is a thin iron pipe, covered with a lid, through which pipe any obstruction by sand in the syphon can be easily cleared away.

The sewer below to which I have referred is constructed to carry off roof and street water, surplus subsoil water, sink and bath water (after being deprived of all suspended matters), and the purified water from public works or manufactories; and to these liquids it is exclusively devoted. Without entering into the peculiar details of its structure, I may say, however, that it is throughout composed of vitrified earthenware similar to that of which inverts of common sewers are now constructed, and is therefore practically impervious, so that neither percolation nor infiltration is possible. The stability of the sewer is also rendered greater from the fact that the high level of the subsoil water above it exerts a constant hydrostatic pressure upon it, counterbalancing all outward pressure of water inside the sewer, in case this should rise, thus preventing any tendency to open the joints of the structure. Hence also sewers upon the Liernur principle may be safely made of lesser dimensions than those built after the ordi-

nary method, and will be much more effective in keeping the sewer clean. It will be understood that in towns already sewered, the above improved sewers would not be laid, but the existing ones used instead.

Next, as to the waste water of manufactories, which includes all water polluted by trade, the principle laid down by Captain Liernur is the one advocated by our Right Honourable President, Dr. Lyon Playfair, namely, that no manufacturer has the right to pass impure water into the sewers, but must be made responsible for first cleaning it. He takes the profits from his trade, and has no right to lay upon the community the charge of purifying that which he himself has dirtied for his own benefit. He knows exactly what constitutes its impurity, and is best able to deal with it. If he professes he cannot do so, how in the name of reason can he expect that any engineer or chemist can accomplish it, when mixed in the sewer with the produce of all other manufactories, each day varying in their volume and chemical combinations? As a matter of fact, however, it is a comparatively easy thing, and in many cases the process of purification, as instances have already proved, will actually put money into his pocket.

It must be borne in mind that no solution of the sewage difficulty can be arrived at unless legislation provides for this source of pollution by prohibitory enactments, enforced by such heavy fines that the manufacturer will soon find it more profitable to comply with the law than to evade it. For the purposes of detection, it is necessary that the effluent water from factories should be capable of being easily examined at any time by the inspector of nuisances; and give him but a portion of the fine inflicted, and he will not be neglectful in the exercise of his duties in this respect. For this purpose Captain Liernur makes on the drainage-pipe before entering the sewer a slight downward bend, in which some of the water flowing off will always be present. From this bend to the street pavement rises an iron pipe, fitted with a smaller one inside, the whole being covered with a cap. In this way the inspector can at any moment, by means of a small hand-pump a few inches long, which he can carry in his pocket, take a sample of the water for analysis, thus rendering detection sure.

The fourth element with which drainage has to deal is *human excrement*, including of course chamber-slops (containing urine), which, as a matter of course, find their way down the closet. This is dealt with by Captain Liernur by an entirely separate and independent system of cast-iron pneumatic drains.

This being the most novel feature in his system of town drainage, and the only one needed in towns already sewered, has, as it were, overshadowed all the other arrangements, and has been itself so much noised abroad that people have somewhat naturally fallen into the error of supposing that this particular subdivision constituted his whole system, instead of being merely part of it. Hence the accusations put forward in English papers and by eminent English engineers (who, if they had paid any attention to Continental engineering, would have known better) that the Liernur system was an incomplete one. The merits and originality of this subdivision certainly deserve a more minute description than the other part of the Liernur system, and I shall therefore enter more fully into its details and the principles upon which it is founded. First, however, I must premise that, in addition to the matters above alluded to as being treated by it, must be included the *sedimentary matters* held in suspension in sink and bath water, which are arrested in their course to the ordinary drains by a simple but ingenious filtering or straining contrivance, and conveyed away by the pneumatic pipes.

It will be admitted on all hands that the requirements of a perfect system for the removal of fœcal matter necessitate compliance with the following eight conditions:—

1st. Removal of fœcal matter out of sight and smell *in* dwellings the moment after production.

2nd. Its removal *from* dwellings without disturbing the inmates, and without the admission of any foul air *into* the dwellings.

3rd. Its removal *out of town* before becoming capable of doing harm—that is, before fermentation—thirty hours after production.

4th. It should not be allowed to enter the sewers for draining rain and house water, for reasons that are perfectly obvious.

5th. It should not become offensive at its place of discharge or deposit.

6th. It should not be allowed to lose *any* of its agricultural value; hence all dilution with valueless substances or fluids should be avoided (most of all mere clean flushing-water), which increase the cost of transportation, and thus diminish the area of its profitable utilisation.

7th. The total system of collection and removal should be equally applicable to all classes of society; in other words,

no expensive fixtures like water-closets should form a *necessary and integral* part of it, nor expensive material be needed for it, like water brought from long distances.

8th. The whole system should not burden the town with any taxes or expenses whatever, if the value of the manure is really enough to cover all charges.

All these conditions are complied with by LIERNUR'S PNEUMATIC DRAINAGE. Its leading features develop themselves naturally out of the above eight points given as the guide for working out the problem; they are in reality as follows:—

1st. Fœcal matter (solids and fluids mixed as produced) is received in a deep funnel, furnished with a ventilating pipe (which *absolutely prevents the escape* into the house of any offensive gases), and is removed completely out of sight. Thus there is no offence either to sight or smell.

2nd. To prevent any annoyance to the inmates afterwards, as by labourers entering dwellings for purposes of removal, an iron pipe is laid leading direct to the closet, and by its means the excreta are removed by pneumatic pressure regulated in the street.

3rd. To prevent the matter doing harm through fermentation, and consequent development of noxious gases, it is removed daily.

4th. To prevent fœcal matter entering the sewers, and there becoming the source of the *endless troubles* of the water-carriage plan, the pipes leading from the closets are placed in connection with tanks placed at the crossings of the streets under the pavement, and out of these the matter is removed, within a few minutes after having entered them, to central reservoirs; the street-tanks serving less as collectors for the material than as accumulators of propelling power (a vacuum). All pipes are of cast-iron, jointed air-tight, so that any percolation and infection of the soil of the town is *impossible.*

5th. To prevent fœcal matter annoying anyone at the place of discharge, it is immediately, by a consecutive and inexpensive process, converted into a pulverulent *poudrette*, or decanted into barrels for transport to the country and immediate use. All the processes occur in hermetically-closed apparatus, so that no escape of gas is possible—all that is formed being discharged and burned up in the engine furnace.

6th. To prevent loss of agricultural value, and to reduce the *transport cost* of the manure to its lowest possible figure, so as to enlarge the area of profitable utilisation to its greatest possible extent, all dilution with water for flushing is avoided,

as water-closets, though they can be used, are quite unnecessary; and for its propulsion through the drain-pipes into hermetically-closed central tanks, and thence into barrels or into the poudrette machine, air only is used.

7th. Through the absence of expensive fixtures like water-closets, or expensive material like water, and through the employment of air for motive-power, which is everywhere close by, the benefit and use of the system is within reach of all classes of society, including the very poorest.

8th. The system does not burden the town with any additional taxes, for the simple reason that it pays completely for itself, and leaves besides a good margin for profit.

A birdseye glance at the system, apart from the above conditions, will give one a better idea of it. The town is divided into groups of houses, each group being served by one underground street tank. Every house is supplied with a Liernur closet, which is connected with a street-pipe joining that tank. Into this tank all the closets on any one of the street-pipes (of which there may be several) are simultaneously emptied by pneumatic pressure. All the street tanks are in like manner, but by an entirely separate and independent line of pipes, connected with central reservoirs under the central building, and into these reservoirs the contents of the street tanks are similarly conveyed. The motive-power for effecting all the operations is derived from a stationary air-pump engine at the central building, in which by a continuous process the poudrette manufacture goes on. This building may be in the very heart of a city, if thought desirable, as the whole operations from beginning to end are not productive of any nuisance.

It is necessary now to glance at the details of the system, and we naturally commence with the house-closet. The Liernur closet requires no water; and, as it cannot offend the most fastidious, is as well fitted for the houses of the rich as for those of the poor; but as the prejudice of the English upper and middle classes in favour of a water-closet is practically immovable, Captain Liernur provides one for them. He says it is an absolutely unnecessary article of luxury, and diminishes the value of the manure; but those who will have it, and can afford to pay for it, may have a water-closet, but not of the kind at present in use, which is not only defective in a sanitary point of view, and wasteful of water, but is so liable to get out of order, and to be abused or neglected by the user, as to be absolutely inadmissible. He provides one, therefore, of the simplest possible construction, perfectly automatic in its operation, and entirely independent of the care or will of

the user, and one in which the basin is kept even cleaner than the present kind by the application of only one quart of water. As, however, this improved water-closet is simply an unnecessary article of luxury, I need not describe it more fully.

The privy-closet without water is, however, of great importance, as, apart altogether from the pneumatic system, it is a model closet for the working classes. Such a closet must comply with the following conditions:—

1st. It must not require intrusion into the house.

2nd. It must require no care nor attention on the part of the user.

3rd. It must not be capable of being put out of order (except, of course, by intentional malice or violence).

4th. It must be one in which all matter is removed *out of sight and smell*, immediately after production, and from which no gases can escape into the house.

5th. It must not be costly nor complicated in construction.

The diagram I exhibit shows the construction of this privy. You will notice its peculiar shape, and that it has a double funnel, one inside the other, with a space of three-quarters of an inch between the two, communicating with a ventilating pipe up to the roof of the house. The descending soil-pipe also is continued up to the roof, and likewise terminates in a ventilating pipe. The inner bottomless funnel, which corresponds with the basin of the present water-closet, is of thin cast-iron, enamelled white, and is only six inches deep. The outer funnel is of dark-coloured earthenware, and to the bottom of the trap is over three feet in depth. The soil-pipe being also earthenware, both the expense and the danger of leaden pipes is avoided. There is thus no possibility of the gas eating away the pipes, as they do in the case of leaden ones, as conclusively proved in Dr. Fergus' paper.[1]

Now let us see how the conditions named above are fulfilled by this privy-closet.

First. Intrusion into dwellings is not required. The trap holds the excremental produce of about three persons, and any fresh accession of fœcal matter or slops forces the former contents into the soil-pipe, and thence they are daily removed by the pneumatic pressure. There are no excessive nor offensive accumulations whatever.

Secondly. No attention on the part of the user is required. There is no water to turn on, and it is impossible that the inner funnel can be soiled; nor, indeed, can the larger funnel,

[1] See *Ante*, p. 536.

unless by accident or design. The peculiar form is the result of extensive observation in hospitals and barracks, under all kinds of circumstances, into which, however, I need not enter. Even if the sides of the larger funnel were intentionally soiled, no effluvia could arise into the house, for reasons that will be explained hereafter.

Thirdly. It cannot be put out of order. This is evident from its construction. There is nothing moveable in it. To prevent obstruction a bar is put across the trap on the soil-pipe side, so that whatever passes that bar will go anywhere. Substances too large to pass can be removed by hand, the cover of the trap being easily taken off for this purpose.

Fourthly. The matter is removed *out of sight and smell* the moment after production, and no gases can escape into the house. The larger funnel is so deep and dark-coloured that the contents of the trap cannot possibly be seen. Even by lowering a candle they can scarcely be seen. All effluvia and gas even if produced would be carried off by one or other of the two ventilating pipes. Both these pipes are furnished at the top with a '*Wolpert air-sucker*,' consisting of a double cone, one inside the other (somewhat like the Gifford injector), so constructed that the air is sucked upwards in the ventilation pipe so long as a breath of wind stirs. Wherever, as in a town, there is light and shade, there never can be absolute stillness of air. A movement of one foot per second, imperceptible to feeling, is quite sufficient to make the *air-sucher* operative. Thus there is always a gentle current of air from the closet into the privy, and between the funnels up to the roof of the house. Hundreds of times has this been proved by visitors with the smoke of their cigars. In the top of the soil-pipe a receptacle with charcoal is placed for the foul air to filter through, and such charcoal is re-oxygenated by the fresh air drawn in by the action of the air-pump. A similar charcoal receptacle could be placed in the funnel ventilator; but is unnecessary, as the matter in the trap is always fresh, and therefore harmless.

As to the fifth head, of *costliness* and complication, I need say but little. The whole cost is about 20*s*. Thousands of these closets are in operation on the Continent, and the report is everywhere unanimous in its praise. For the truth of every word I have uttered in regard to it I may with confidence refer to Mr. Baldwin Latham. One of his assistants watched its operation for months at the Vienna Exhibition, and has reported to him about it; and further I may add that when it *became a question*, after the closing of the Exhibition

to the public, as to which closets should be kept in use, the water-closets were shut up, and the Liernur closet kept open. If that evidence is not sufficient, I have in my possession that of the Corporations of Amsterdam and Leiden, and of the Director-General of the Vienna Exhibition, also the report of the Commissions appointed by the Kingdom of Saxony and by the Municipality of Naples to examine Liernur's pneumatic system. Besides this, I have the testimony of my own eyes and nose, and that of several members of English Sanitary Boards, who have themselves visited Holland to inspect the system. All unite in the most unqualified praise of the system, including the closet. Notwithstanding this, I am still prepared for unbelievers. To them I would say, in the words of the Saxony Commissioners: 'We cannot but recommend that many an engineer and physician who now opposes it shall be given an opportunity to satisfy themselves of its good working by ocular demonstration.'

Having now described the closet, I desire to draw your attention to the evacuating process, which takes place daily, or oftener, if it be desired. The street pipes run up or down the street, communicating by branch-pipes with the closets of the houses. During the whole of the day, except during the two or three minutes that process takes, all the houses are cut off from the street tank with which they are connected by a simple cock like that of a water-main, and placed at the point of junction of the street pipe with the tank. In the same way the street tank is also cut off from the separate system of pipes leading to the central reservoirs. Now, the air-pump engine maintains in those central reservoirs, and in the whole length of pipes connecting them with the tanks, a vacuum of three-quarters atmosphere, and this is made use of in the following way:—Two labourers patrol the street. Coming to a street tank, they open the lids in the pavement and fix turn-keys upon the cocks. They also screw on a little vacuum meter. One then turns the cock on the central pipe. The air in the tank is in a moment sucked out, and the meter indicates the extent of the vacuum thus created. He then closes the cock. In that tank he has thus got a motive-power stored up and confined, which is used for emptying the pipes in connection with the houses, by simply opening the cock upon that pipe. This is repeated two or three times and the matter all collected in the tanks; and so they treat every street pipe, of which there may be several joined to one tank, but draining different streets.[1] All the street pipes being emptied into the tank

[1] The greatest number of privies emptied through one street pipe is 138, and this is at Amsterdam.

the contents have now to be sent on their road to the central building. For this there is a second connection with the central pipe communicating with the bottom of the tank, the cock upon which being opened, all the matter is sucked up, and the tank is empty.

It is worthy of note that in the whole system there is no valve, or anything that can get out of order. The branch-pipes from the houses are laid with a succession of grades, not less than one in ten, rising at every twenty feet by a short syphon-rise two feet high to the beginning of a new grade, until they fall into the street pipe. It is by means of these continually repeated short bends that the removal of the contents of so many closet-pipes is possible, whether any or many are empty on account of the house being uninhabited, the result being simply based upon a well-known law of barometers with several disconnected columns of liquid. The fœcal matter in the house pipes practically forms itself the required temporary closure from the street pipes, allowing through its inertia all the branch-pipes to be simultaneously and equally acted upon under all circumstances. For this purpose the sum of the bends or syphon-rises is in the case of all the houses served by one street pipe, equal; so that the resistance to the pressure of the atmosphere is just in inverse ratio to the amount of fœcal matter to be removed.

Having got the matter into the central reservoirs, the question now is, how is it got rid of? On the Continent the manure is used in a liquid state, and the ingenious way in which it is transferred from the underground reservoir to a decanting tank above-ground and thence into barrels, without any escape of air whatever, deserves a short description. The full and empty receptacles are connected with two tubes, by one of which when a vacuum is made in the empty vessel all the matter flies into it. By the other pipe the air thus displaced finds its way into what was before *the full vessel.* Thus no air or gas is allowed to escape.

The same is the case with the filling of barrels, which are immediately transported into the country for utilisation. Wherever, however, it is desired to convert the manure into poudrette manure, for storage, it is by means of air-tight pipes distributed to the various drying retorts for its reduction. In the first place, it is mixed with about one per cent. by weight of sulphuric acid, to prevent the formation of ammonia. It is then without further preparation ready for the evaporation process. The leading principle involved in this is to boil the sewage in a partial vacuum (the advantage of this being that

then the boiling-point is reached at a much lower temperature than otherwise would be the case), and to repeat this process twice over, using the hot vapours of the first *boiling* as a source of heat for the second. The reduction to poudrette occurs, therefore, in two stages; the first transforms the fluid matter into a thick sort of pap, the second into a dry substance.

This method of boiling in a vacuum and using the hot vapours obtained thereby for another boiling is well known in the manufacture of beet-sugar, and is called '*à double effet*' or '*à triple effet*,' according to whether the process is repeated once or twice.

The apparatus for bringing this principle into action is very simple. There are, of course, two different evaporating machines. The one for the first boiling consists of an hermetically-closed vertical boiler, fitted inside with several coils of red copper pipe, through which circulates the exhaust steam of the air-pump engine (which collects the fœcal matters), after being superheated in the hot flue of the chimney, the steam escaping as condensed water after having given off all its heat. The fœcal matter being let into this boiler above, is brought to a boiling point through contact with the coils of pipe, and is drawn off below in the thick pappy condition already referred to, while the hot vapours containing the evaporated water are conducted to the second apparatus, where they are condensed, this condensation creating the partial vacuum which makes the violent boiling with the exhaust steam so easy, notwithstanding its low temperature of about 230 degrees Fahrenheit.

The second apparatus consists of a horizontal boiler, which communicates with an ordinary cold water spray condenser, and stands in connection with the air-pump engine. In this boiler are placed two horizontal cylindrical hollow drums, rotating upon their axles in troughs into which the already thickened fœcal matter continually flows. These drums dip their under sides in this trough, thus covering their surface with a layer of it during the act of rotation. The inside of the drums receives the hot vapours of the first apparatus, thus serving for their condenser, as mentioned before, and thus becoming heated for the second process. The thin layer on the surface of the drums is hence on the one side submitted to the heat thus imparted to them, and on the other side to the vacuum in the boiler, the speed of rotation being so regulated that the layer dries up completely in the course of one revolution, so that it can be scraped off in the form of a crust. This scraping is done by a fixed inclined knife which meets

the drum in turning around, and the crust falls down in small flakes or short shavings in a sort of box standing in the bottom of the boiler.

In the evening, when the work is done, this box is rolled out (it standing on small wheels for the purpose), is emptied, and the contents put into bags for transportation.

This poudrette may fairly be said to contain *all* the manurial elements of the refuse of a town which is produced or collected in a liquid form, being those of human excrement (solid and fluid) *plus* those of wash-basins and slop-pails, *plus* the sediment of the kitchen waste. It is hence very valuable, but what gives to it in this instance a great advantage is the fact of its being manufactured from the raw material alluded to without the use of extra fuel. The heat thus utilised for evaporating the water forms 93 per cent. of the heating power in all steam-engines, which heat would otherwise be entirely wasted. The whole process from beginning to end is a continuous one, the motive-power being derived from the air-pump, and all the air and gas, if such be formed, being discharged into the furnace of the engine and burned, so that no offence or injury to health can possibly occur. I purposely say, *if* gases are formed, as experience shows that owing to the confinement of the matter in such narrow quarters, its stillness, the non-dilution with enormous quantities of water, and the non-exposure, the action of the atmosphere during the whole day until the few minutes when the emptying process takes place, fermentation is delayed. An interesting experiment to prove this was made by the medical inspector of North Holland at the instance of the Health Committee of Amsterdam. A portion of pipe was half-filled with fœcal matter and closed up at both ends. A vertical pipe was erected upon it, terminating in a syphon trap, filled with water. The principal pipe was buried horizontally in the ground at the depth usual in the Liernur system, and during a whole year it was watched to see if any tension was caused by the formation of gas. The water was renewed from time to time to replace loss by evaporation, and it was found that no formation of gas did take place. The fact is, that the air in the pipe is speedily saturated with moisture generated by evaporation; and there being but little of it, and that little confined, its putrefying properties were soon exhausted.

It has been said that the Liernur sewerage system is the solution of the sewage difficulty. The pneumatic system, it has been seen, removes and converts into manure all excrement, including chamber-slops, and the sedimentary products of sinks and bath-water, and allows nothing to flow into the

common sewers but rain and strained house-water and the purified water from manufactories.

The pollution contained in this common sewer water is but little, seeing that nearly all organic matter capable of putrefaction is kept out of it, and such water might no doubt be safely passed into our rivers, without danger even to fish-life. Such has been found to be the case in Amsterdam; but Captain Liernur's system, to be theoretically perfect, provides for the purification of even this. The nature of its constituents is *simple, well-known, unvarying,* and can be easily treated, although most people will think that such treatment will be carrying out purification to an unnecessary degree of particularity. It can be done or not as authorities choose.

I purposely abstain from going into estimates of cost and revenue, as these differ according to circumstances, the cost, as is the case with all drainage works, being in proportion to the area drained rather than to the number of population inhabiting that area. Suffice it to say that the estimate of the revenue from manure varies from 8*s.* to 11*s.* per head of population.

The system is to be tried soon, and for the first time, in this country, so that in a little while we shall ourselves be able to judge from our own experience whether it comes up to the high standard put forward by its supporters. I can only say, from my own personal experience of it abroad, I believe it will, and I cannot conclude better than in the words of the Commissioners of Saxony: 'We cannot but wish and recommend that many an engineer and physician who now opposes it will be *given* the opportunity to satisfy himself of its good working by ocular demonstration.'

On the Cleansing of the Sewage of Towns and Villages. By J. Bailey Denton, C.E.

It was suggested to the author of this communication by the authorities of the International Exhibition at South Kensington that he should illustrate the process known as 'Intermittent Downward Filtration,' as suggested by Dr. Frankland, and first carried into practice by the author at Merthyr Tydfil, by an example to be daily in operation in the western Annexe of the Exhibition. Having taken advantage of the suggestion, the author desires to place before the Association the results. The exhibit remains in operation up to this time.

London sewage is delivered daily to the several exhibits

of sewage treatment by the authorities of the International Exhibition independently of the exhibitors. The quantity delivered to the author for treatment by intermittent downward filtration has been 25 gallons daily (except Sundays). This sewage has been distributed each day over the surface of three cubic yards of natural soil of a free description. Having filtered through the soil to a depth of five feet, it is discharged as a clear effluent by a small outflow from under-drainage increased and diminished in volume as the sewage is applied. Owing to the necessarily limited character of the exhibit, it was anticipated that the purification of the sewage by the soil would become less efficient the longer it was used. It will be seen, however, from the following analysis that the contrary effect has been the result.

The sewage was first applied to the soil on June 23 (1874), and the application has been daily continued since that date, Sundays excepted. On June 30—seven days after the first application—a sample of the effluent water was collected and sent to Dr. Benjamin Paul, F.C.S., for analysis, who forwarded to the author the following results, viz. :—

Free Ammonia	·009 in 100,000 parts.
Organic Nitrogen . . .	·049 "

On August 10—48 days after the first application of the sewage to the soil—a second sample was collected and analysed by the same eminent chemist, when he reported the following results:—

Free Ammonia	·006 in 100,000 parts.
Organic Nitrogen . . .	·038 "

On September 14—83 days after commencement—a third sample of the effluent was taken, and of it Dr. Paul says that it was 'even better than that of August 10.' This is shown by the following figures:—

Free Ammonia	·002 in 100,000 parts.
Organic Nitrogen . . .	·022 "

In order that these figures may be compared with the standards of purity recommended by the Rivers Pollution Commissioners, it should be stated that, disregarding free ammonia as of comparatively little importance, they considered that any liquid containing more than ·3 part of organic nitrogen in 100,000 parts should be deemed inadmissible into rivers.

In the supplies of drinking water to the Metropolis by the eight companies the mean amount of organic nitrogen appears to be ·028 in 100,000 parts.

The improvement in the condition of the effluent water

which the figures of Dr. Paul show is doubtless due, in a great measure, to the means taken to deliver and distribute the sewage on to the soil with regularity, each cubic yard of soil receiving precisely the eight gallons of sewage it is designed to cleanse and discharge. This is effected by the use of the 'Self-acting Sewage Regulator,' the object of which contrivance is to apportion and deliver intermittently the precise quantity of sewage which land prepared for Irrigation or Intermittent Filtration is designed to utilise and cleanse—and this is done independently of all supervision and of the outflow contributing the sewage, which may at one time be extremely copious and at another little more than a dribble. The irregularity of discharge attending the sewerage of small towns and villages, isolated mansions, and all kinds of public establishments, is found to be the great difficulty in dealing with those communities. Besides overcoming this evil, and thereby reducing the comparatively heavy cost of applying small quantities of sewage to land, the 'Regulator' secures with certainty that intermittency of application which is so essential to purification. Moreover, the action of the 'Regulator' being automatic requires no attendant at night or on a Sunday.

The author, having carried out with complete success the Intermittent Downward Filtration Works at Merthyr Tydfil, under order of the Court of Chancery, as a temporary means of abating the nuisance arising from the pollution of the Taff—which, after answering their temporary purpose for three years, may be used as a 'safety valve' to the permanent works of wide Irrigation, or may be discontinued now that the wide breadth of land which the Local Board had previously purchased for surface irrigation has been laid out and completed as a sewage farm—is anxious to bring before the Congress this treatment, which requires only a small area of land, as the most effectual way of cleansing sewage *permanently* where land is very costly. The Rivers Pollution Commissioners show, by six analyses taken in the years 1871 and 1872, the following mean results from the Intermittent Downward Filtration adopted by the author at Merthyr Tydfil:—

Samples taken June and October 1871, *and July and October* 1872.

Organic Carbon	·156	in 100,000 parts.
Organic Nitrogen	·032	"
Ammonia	·063	"
Nitrogen as Nitrates and Nitrites	·269	"
Total combined Nitrogen	·352	"
Previous Sewage or Animal Contamination	2·887	"
Chlorine	2·840	"

Upon these figures the Commissioners say—'Judged by popular standards, these samples would be pronounced to be fairly good portable waters. They were colourless, transparent when collected, and even when viewed with reference to their chemical composition were considerably superior to the average of Thames water, which is habitually used for all household purposes in London; indeed, there is a close resemblance in chemical composition between the effluent water issuing from the intermittent sewage filters at Merthyr Tydfil and that portion of the London water supply which is drawn from the Thames.'

After the meeting of the Association at Glasgow—viz., on October 19 (1874) a fourth sample of the effluent from the Exhibit at South Kensington was forwarded to Dr. Paul for analysis with the following results:—

Free Ammonia	·002
Organic Nitrogen	·016

Analyses by Dr. Paul and other chemists confirm these results.

Intermittent Downward Filtration will be found equally valuable whether adopted by itself on a limited area of land for the primary object of purification, or in combination with surface irrigation on an extended area, inasmuch as in the latter case it enables the authorities to secure the best return obtainable from the utilisation of sewage. It enables sanitary authorities to utilise as much land as they can get, be it little or much, with a certainty of cleansing the sewage up to the standard recommended by the Rivers Pollution Commissioners, and of gaining at the same time some return in the shape of crops from the filtering areas, if the quantity of land be not less than one acre to 1,000 persons. When adopted with irrigation, Intermittent Downward Filtration becomes the safety-valve of sewage farming, inasmuch as with a certain quantity of land specially prepared for intermittent filtration the farmer need not take sewage upon the irrigated land when he does not want it, nor when the cost of application will exceed the benefit to be derived from it. Where only a small area of land can be reached by gravitation, and it may be deemed desirable to lift the sewage to a greater breadth of higher land for profitable utilisation, the intermittent filtration process may still be resorted to on the lower land with very great advantage. In such instances the sewage may be lifted on to the higher land when there are persons to pay a full rent for both land and sewage, in which case the quantity of sewage to be lifted will be precisely that which the sewage

farmer above desires to take, and only when he wants it. It would be lifted during the day and on week-days, and not at night nor on Sundays, but would be run into the filtration areas.

An illustration of the cost of adopting Intermittent Downward Filtration, in a case where the land was very costly and the works of drainage and surface preparation (including carriers, &c. for distribution) expensive too, may serve to show how small will be the rate charged on a district for such mode of disposal, when calculated upon the population and rateable value of the district contributing the sewage. In comparing the cost of Intermittent Downward Filtration with that of any other process, it cannot be regarded as an '*acreage*' outlay, but as one in which the total expenditure with its profit or loss must be fairly considered in relation to the ratepayers' interests.

In the case of a district containing a population of 15,000 with a rateable value amounting to 45,000*l.*, and requiring 15 acres of land to purify the sewage discharged from the district, the cost (as proved by actual experience) may reach the following items :—

Land	£3,000
Under drainage, preparation of surface, carriers for distribution, chambers, &c.	2,000
	£5,000

The charge on the district necessary to repay this sum with interest in 50 years would amount to 232*l.* 10*s.* 0*d.* per annum.

The 15 acres of land, being divided into 3 equal areas of 5 acres each, one of which would be sufficient for the daily purification of the sewage—each coming into use in this way in rotation—would be let for gardening purposes. The 10 acres not in daily use would be let to market gardeners by auction at the highest prices they would give for the land, with as much sewage as they require, and no more. The lowest rent so obtainable would be 10*l.* an acre, while the 5 acres devoted to the purification of the year's sewage would, if let at a rent, or if retained in the hands of the sanitary authority, realise a return beyond the cost of attendance of at least 5*l.* an acre. In this way 125*l.* per annum would be realised, leaving a loss of 107*l.* 10*s.* per annum upon the work. This sum of 107*l.* 10*s.*, divided amongst 15,000 persons, is equal to an annual charge of rather more than 1½*d.* per person; when apportioned on the rateable value of the property within the district, it amounts to about ½*d.* in the pound.

From this it will be seen that, with a very limited area of land and with comparatively costly works, the disposal of sewage by intermittent downward filtration may be attended with a loss unappreciable to the ratepayers; while if it be associated with irrigation under favourable circumstances, that loss may be turned into a profit, with the profit made larger as the area of irrigation is increased.

It is to point out the great advantages of associating Intermittent Downward Filtration with wide surface irrigation as a means of securing a profit, as well as to show that a small area of land will suffice for purification where land is difficult to get, that the present paper has been written.

Outlines of Sanitary Science.

By Thomas Webster, Q.C., F.R.S.

SANITARY Science may be considered with reference to the air we breathe, the water we drink, the soil on which we dwell, the dwellings we inhabit, the clothes we wear, the food we eat, the warmth we enjoy. In these may be included, or to these may be added cleanliness, in which, indeed, may be comprised most of the foregoing. First of all amongst these are air, water, and soil; they dominate the whole; in proportion as these are defective in any particular, disease and immature death result. It has been truly observed that God made the country, but man made the town; and in the way in which man has made the town—that is, the condition as to level and drainage of the soil in which he has placed it—the number of dwellings erected per square acre or square mile, the character of the dwellings, the materials of which the dwellings are constructed, the relation between the number of inhabitants and the cubical contents of the living apartments—all materially affect the health of the people. In many large towns, there is another consideration of the most material import, viz.—their self-created pollutions. It has been said that Rome was great—1, because of its civil law; 2, because of its aqueducts; 3, because of its *cloaca maxima*, which in dimensions, extent and manner of traverse—from the high through the low parts of the city to the Tiber—and its uses, has no parallel except the metropolitan north and south sewers to the Thames.

Now, in the progress of modern civilisation there has been created a *cloaca maxima* in many large towns, but without the precautions attached to its Roman ancestor. The turning of the *excreta* of our houses and manufactories into sewers, and

thence into our rivers, destroying the fish, tainting and poisoning the water, which the residents on the margin of the streams of the water-sheds are entitled to have transmitted in a state fit for use, has created nuisances unknown to our forefathers. The great sanitary question of the day, then, is how is this right to be secured, and nuisance abated? The fiat has gone forth that natural watercourses shall not be polluted for selfish avarice or individual profit. The air has been preserved, by recent legislation, from contamination to the personal advantage and profit of those who were its polluters. The water and soil must be brought under the same conditions. The first step towards the extinction of the nuisance of the *cloaca maxima* is the exclusion of all domestic *excreta*. The common law is probably sufficient to deal with the *excreta* of manufactories: but the dealing with house drainage is matter of municipal regulation.

First, then, as a general rule, separate the storm from the house water. The rivers require to receive for scouring and maintaining power the water of each water-shed, which should be regarded as a unit in sanitary legislation, in lieu of the artificial districts of modern legislation for poor or police. The water falling as rain from the heavens under ordinary circumstances, or as a torrent in thunderstorms, is the great scavenger of Nature. Secondly, deal with the house water and its *excreta* according to the special circumstances of each locality. To deal with the storm and domestic water, as in London by a high and low level *cloaca maxima* on the north and south side of the Thames, may be a triumph of engineering, but is a blunder in sanitary science. To deal in one mass with the storm water of Glasgow, and the fifty gallons per day per head of its population, that is, nearly twenty-five million gallons per day, would be to repeat the same mistake at a cost to the municipality wholly unjustifiable, because wholly unnecessary.

The labours of sanitarians have shown how the *excreta* can be utilised, nay, in some cases, made profitable. Observation at Liverpool has shown fifteen gallons per head of the population per day, instead of fifty, to be adequate for domestic purposes. Assuming, then, the storm to be separate from the domestic water, and the consumption reduced to such a limit, the municipality would have to deal only with 7,500,000 gallons per day instead of 25,000,000, or with less than one-third of the present domestic consumption. Another striking consideration has to be adverted to; the *cloaca maxima* is a continuous cesspool containing matter producing gases deleterious to human life, which are diffused by the water and air throughout the whole district. The *cloaca maxima*, having only storm

water, need have no such polluting effect; a proper system of continuous street cleansing, as practised in some of our large towns, will preserve matter valuable as manure, and reduce the pollution of the water in the *cloaca* to a minimum—in fact, to a quantity wholly innocuous to the watercourse in which it is discharged. But if the *cloaca* receive the house water, and be continuously polluted by the house *excreta*, it must always be a pest-house, which no ventilation can prevent or cure. If the house *excreta* be excluded from the *cloaca*, and confined to its own drain, the source of this insuperable evil will be removed. The conduit for the house water may be self-cleansing, and can be placed under adequate control as to ventilation.

The principles just stated may then be summed up in the following words:—Separation of storm from house water; transference of the latter by independent self-cleansing and ventilated drains to the outfall. The water of the *cloaca* will go into the watercourses of the water-shed unpolluted. The next question is the dealing with the house water so transferred to the outfall. Its outfall, or the place to which it is transferred, and the mode in which it is dealt with there, must depend upon the peculiarities of the place. An obvious mode is collection at some low level by gravitation, and pumping thence to its ultimate destination. Some towns, owing to the peculiarities of levels and other local circumstances, may admit of a large proportion of the house water being dealt with by gravitation, so as thereby to reduce to a minimum the quantity to be pumped or dealt with by artificial means. Suppose the house water with its *excreta* to have been transferred by natural or artificial means to some suitable spot, the first step towards utilisation is the separation of liquid and solid. Experience has shown the effluent to be as (if not more) valuable in its application to land as the whole liquid and solid together. The whole being deodorised by alumina, chalk, clay, and other substances, the liquid and solid may be separated—the former applied direct to land, or permitted to flow as as effluent into the watercourses; the latter, existing as *sludge*, to be otherwise dealt with. Experience has shown two modes of dealing with the *sludge*. The one (Hope's) by burial in a suitable soil, whence its manurial properties will pass through into the products of the soil; the other (Scott's) by conversion into cement by cremation. Processes such as the A, B, C, the Witthread, and others may in certain cases be adopted in lieu of or in connection with the foregoing.

The foregoing is a short outline, the result of the experience of a quarter of a century and of the expenditure of

millions of money, of the practicable modes of dealing with the great evil which that amenity of social life, the water system, has brought upon us.

By JOHN DOUGALL, M.D., Glasgow.

The Science of Disinfection.[1]

IN the midst of the confusing diversity of opinion among scientific men on disinfection and the agents capable of attaining it; in the midst of so much talk and conjecture made by both medical and non-medical men in the public journals; in the midst of the deplorable confusion between disinfectants, antiseptics, and antizymotics; in the midst of the singular facility with which it is given and received that a disinfectant *par excellence* is a certain mixture which does away with, or masks, the odour of putrefaction or other bad quality;—there is truly much need of receiving something less uncertain on this question, something which will be the result of severe comparative experiments, and not conceptions found or adduced from the property of impeding the putrefaction of organic substances, or of arresting or neutralising it, or neutralising or masking the smell.

These words are quoted from a review in an Italian journal, *La Nuova Liguria Medica*, of a short paper of mine, which appeared in the *Lancet* about twelve months ago, on Carbolic Acid and Zymotic Disease; and I am sure that anyone viewing the question disinterestedly and from a scientific aspect will readily endorse the writer's sentiments.

With the object, therefore, of offering something less uncertain on this subject, I shall presume to lay before you some results of, and deductions from, experiments lasting some years and entailing much close attention and trouble. Many of you must have observed that the words putrefaction and fermentation are frequently used as synonyms, implying thereby a belief in the identity of the putrefactive and fermentive processes, though they are sometimes employed as distinct terms without their difference being defined. Now, I think it can be shown, that whatever be the ultimate changes produced in a putrefying or in a fermenting fluid—and these are apparently the same—putrefaction and fermentation are not identical, and that this point constitutes the foundation of scientific disinfection.

If an aqueous solution of fresh beef juice be set aside for some hours and then examined microscopically, it will be found swarming with bacteria, vibriones, amœbæ, &c., in active motion. The fluid, hitherto clear and odourless, soon gets

[1] See *Transactions*, 1864, p. 558.

opaque and fetid. In this instance its reaction is of course neutral, but the result is the same were it moderately alkaline or very faintly acid. Furthermore, if the solution is put in a cool and dark place with exposure to air, it will be found at the end of from nine to twelve months still swarming with life, still cloudy and fetid, still giving an appreciable precipitate with nitric acid and heat, though these conditions are now less marked than at first. In a few months later putrefactive reduction is complete; the solution is still cloudy, but now free from putrid odour; a quantity of sediment lies at the bottom of the vessel; a stray microzyme is only seen here and there; it now gives a mere trace of precipitate with nitric acid and heat; and its specific gravity, at first perhaps about 1·6, and which has been gradually lessening, is now probably 1·1, or at most 1·2. Such are the physical characteristics of simple putrefaction; but there being so many kinds of organic matter, one or more of these appearances may accordingly be subdued, absent, or altered. For example, fresh healthy human urine, or hay infusion, soon teems with microzymes; both get clouded, but neither responds to the tests for albumen. The urine emits a moderate fetor, and, at first acid, gets alkaline; but hay infusion keeps comparatively sweet, and, at first neutral, remains so. Then, as is well known, putrefying organic matters yield very various offensive effluvia, according to their constitution and the surrounding medium. There is one condition, however, which is constant in all spontaneously decomposing organic substances, viz. the presence of microzymes. These organisms are certainly the first, last, surest, and in weak solutions frequently the only sign of true putrefaction, the faintest degree of which is coincident with their visible existence—developing or generating them, enduing dead matter with life, or kindling the tiny dynamics of vitality dormant in their as yet hypothetical germs. Some consider them the cause, others the result, of putrefaction; while some hold their function in nature as malignant, others as benign.

So much for putrefaction; and now as regards fermentation and disinfection. If to a portion of the same beef juice solution a quantity of a mineral, or any of the more common vegetable acids, be added so as to cause 'marked acidity,' the mixture will be found in a day or so to contain one or more small tufts of mycelia, their numerous filaments, partly dissepimented from fructification, radiating from a single nucleus, like those of thistle-down; also free spores and torluæ. If the proper quantity of acid have been added, no microzymes are present, and the fluid, at first slightly hazy, soon gets clear; it has of course an acid reaction, a not unpleasant mouldy

aroma, and in about four months, as compared with the putrefying fluid previously noticed, ceases to give a precipitate with nitric acid and heat. Supposing, however, that the solution is only rendered moderately acid, then it will ferment at first as before, but in a short time (commonly a few days) it also putrefies, and the two processes continue for a brief period. Latterly fermentation ceases, putrefaction continues, and the fluid is now neutral. Again, if to a portion of putrid beef juice a small amount of acid be added, then in a few minutes the contained microzymes die, and in a day or two minute fungus tufts are seen in the fluid, which now gradually ceases to putrefy, and continues to ferment till the process is exhausted. Again, if to a portion of putrid beef juice a slight excess of acid be added, the mixture is soon odourless, or smells like hawthorn blossom, or spiræa ulmaria, is nearly translucent, free from microzymes and fungi, but gives a precipitate with nitric acid and heat, and remains so indefinitely.

Furthermore, if to a portion of fresh or fermenting beef juice a larger quantity of acid be added than would cause and sustain fermentation *per se*, the mixture neither putrefies nor ferments; it keeps clear and odourless, responds to the tests for albumen, and continues thus indefinitely. (It may be here stated that the acid chiefly used in these experiments was hydrochloric.) The foregoing remarks do not, of course, apply to solutions of beef juice only, but to all fluids containing animal matter. (Specimens shown.) Now, these results are to me irrefragable proofs that putrefaction and fermentation, however correlated, or whatever ultimate changes they produce on animal fluids, are distinct processes. There are no two diseases of the human body with symptoms more opposite, definite, and diagnostic; there are no two pathological changes more different or pronounced; and whether their phenomena be considered from a chemical or physical aspect, they are found absolutely diverse. Such being the case, the question suggests itself, is organic matter as detrimental to health when fermenting as when putrefying? There is, unfortunately, in every town and village in the land abundant evidence showing that putrefying matter is very injurious to health, while we have no opportunity of ascertaining the effects of fermenting matter in this respect. Because putrefaction is natural and spontaneous, but fermentation, as explained, is artificial and involuntary. Judging, however, from the manifestations of the two processes, it is obvious that fermescence must be harmless as compared with putrescence, and their æsthetics as different as their influence on health. Putrid matter evolving noxious effluvia for nearly twelve months,

cannot but be more hurtful than fermenting matter, almost odourless, and being fully decomposed in about four months. Nor are minute fungi any more than bacteria, proved to be hurtful when inhaled or swallowed; and those present in fermenting organic solutions are the same as those that grow in cheese, milk, fruits, or other acid animal or vegetable substances in a state of decay, and which are swallowed with impunity. Furthermore, there are many who hold, and I think rightly, that the specific toxic principles of at least typhoid fever and diphtheria are generated *de novo* from putrefying animal matter, which all zymotologists freely admit forms a suitable soil for propagating the whole genus zymotica. Now the disinfecting action of the stronger acids is undoubtedly in many cases owing to their property of substituting fermescence for putrescence, this being the sure result of their moderate use in disinfection. But, as already stated, these acids when added in excess prevent and arrest fermentation and putrefaction. Their action I hold to be thus destructive, in the sense that it dissolves and annuls by causticity the structural configuration of the organic texture or molecules, which being further immersed in an acid medium is thus rendered incapable of spontaneous decomposition. The indication of albumen in the fluid by the subsequent addition of nitric acid is less pronounced than when the mixture is newly made, suggesting the probability that it would ultimately cease to coagulate on the destructive influence being prolonged.

This corroding action of acids on organic substances is, in a hygienic sense, obviously better than the fermentive action; and fermentation, in the same view, is again better than antiseption. If organic matter be fermented, it is probably rendered incapable of engendering or nurturing zymotic poisons; if cauterised, it is amorphosed, in the sense already alluded to; but if antisepted, it is preserved. Now the antisepting of effete nitrogenous substances, excremental or otherwise, has of late been the chief point aimed at in disinfection, and I concede that, as regards fresh animal matter about to putrefy and taint the air, it is beneficial. But what is the consequence if it be practised where a zymotic poison is present, say on an enteric or choleraic stool, or in an atmosphere contaminated with the infinitesimal toxic entities of diphtheria, variola, or typhus? Why, of course, that the poison is preserved as well as the offending matter. The multiplication of zymotic units may be arrested, but the virulence of those already generated or matured, is conserved. What prevents the molecular disintegration of the one, hinders also that of the other. Thus antiseption is seen to be an admirable contrivance for main-

taining a constant supply of zymotic germs, or pathoplasts for future epidemics.

This fallacy seems to rest on the assumptions that contagia infecta may arise *de novo* from, and are propagated by, decaying animal matter, and that because antiseption arrests decay it also renders contagia harmless. Hence carbolic acid has been largely used in smearing the bodies of small-pox patients; it has been kept vapourising in hospital wards, sick rooms, and other infected places; during the rinderpest cloths saturated with its solutions were hung over the horns of cattle, and their stalls and sheds coated with it; it has been given internally both to man and the lower animals for zymotic disease; it has been put into the bed-pan about to receive typhoid and other excreta; the bed clothes from fever patients have been held as harmless when soaked in its solutions; in short, it has been implicitly relied on as a prophylactic of, and antidote for, every phase and kind of contaga infectia.

Now there are no valid grounds either on logic or fact to assume, as is constantly but I think unconsciously done, that because carbolic acid can prevent or arrest putrefaction, it can also annihilate or annul zymotic poison. To quench decomposition is one thing, and to kill infection another. Sequelæ are not necessarily affected like their cause. As common salt differs in its properties from sodium and chlorine, and hydrocyanic acid from hydrogen, carbon, and nitrogen, so zymotic poisons differ from merely putrid matter. What affects sodium or chlorine separately, does not necessarily affect in the same way common salt; and what affects isolated hydrogen, carbon, or nitrogen, does not therefore similarly affect hydrocyanic acid. Hence, what affects decomposing organic matter does not, as a consequence, in like manner affect zymotic poison. I now proceed to show that contagia and infectia are probably preserved rather than destroyed by carbolic acid, and also to point out some additional facts which indicate a scientific and reliable method of rendering these inert.

1st. A saucerful of pure carbolic acid liquefied by a minimum of water was enclosed within a glass bell-jar of one cubic foot capacity. Twelve hours after, when the jar was filled with strong carbolic emanations, a slip of glass with a minim of vaccine lymph on its surface was placed in the centre of the jar, where it was kept for 36 hours along with the saucerful of acid. The lymph was now moistened with water and glycerine and the reaction found to be neutral; it was then sealed in capillary tubes, and in a few days a child successfully vaccinated with it. Several tubes were filled from the resulting vesicles.

2nd. The lymph from one of these tubes was mixed with ♏i. of a 1 in 50 aqueous solution of carbolic acid ($\frac{1}{50}$ gr.), allowed to dry, exposed to common air for 10 days, moistened with water, reaction neutral, and a child successfully vaccinated with it. Vaccinations with the lymph from the resulting vesicle all succeeded.

3rd. A tube of vaccine lymph was mixed with ♏ii. of a 1 in 20 aqueous solution of carbolic acid, equal to $\frac{1}{5}$ gr. of pure acid. The mixture was milky from coagulation of the lymph. It was at once sealed in tubes. Five days after a child was vaccinated with it. A week after the operation was seen to be unsuccessful—the scratches on the child's arm being quite healed.

4th. A tube of vaccine lymph was mixed with ♏ii. of a 1 in 20 aqueous solution of carbolic acid, equal to $\frac{1}{5}$ gr. pure acid. The mixture in this instance, instead of being sealed in tubes, was exposed on a slip of glass for 14 days, and a child successfully vaccinated with it.

5th. I repeated this experiment, excepting that the carbolized lymph was exposed only 12 days. Vaccination was again successful.

6th. Separate portions of vaccine lymph were exposed to various volatile media in the same manner as in the 1st experiment, but only for 24 hours. They were then liquefied with glycerine, the reaction of the mixture ascertained, and sealed in tubes till children were vaccinated with them. The results showed that with the mixtures of lymph and glycerine which were neutral or alkaline, vaccination was successful, while with those that were acid it was unsuccessful. These experiments were repeated with the acid bodies only; but the acidized lymph, instead of being sealed in tubes, was exposed to the air for about 12 days in order to see whether, as was the case with carbolic acid, the infecting power of the lymph was merely suspended. The results, however, were the same as when the lymph was sealed in tubes. The following is a tabular form of these:—

Results of vaccinations with Lymph exposed to the vapours of the undermentioned bodies.

Successful	Re-action of Lymph and Glycerine	Unsuccessful	Re-action of Lymph and Glycerine
Carbolic Acid	Neutral	Chloride of Lime	Acid
Chloroform	Alkaline	Sulphurous Acid	"
Camphor	"	Nitrous "	"
Sulphuric Ether	"	Glacine acetic "	"
Iodine	Neutral	Hydrochloric "	"

Regarding the 1st of these experiments, I wish you particularly to bear in mind this simple but important truth, namely, that the infecting property of a minim of vaccinia is unimpaired after being buried for 36 hours in the heart of a cubic foot of concentrated carbolic vapour.

In the 2nd experiment, ♏i. of a 1 in 50 aqueous solution of carbolic acid mixed with a tube of lymph and exposed 10 days has no effect on the physiological property of the lymph. In the 3rd experiment a small tube of lymph mixed with ♏ii. of a 1 in 20 aqueous solution of carbolic acid, that is a saturated solution, the acid present being equal to $\frac{1}{5}$th of a grain, and the mixture sealed in tubes for 5 days, failed to vaccinate.

The 4th and 5th experiments are repetitions of the 3rd, excepting that the mixtures of lymph and acid were exposed to common air for 14 and 12 days respectively before being used to vaccinate, which was done successfully.

The results of the 4th and 5th experiments show that even when lymph is incorporated with what is manifestly a large quantity of acid (nearly equal parts), its infecting property is but suspended, and that too only when the mixture is hermetically sealed from the atmosphere, as in the 3rd experiment. Whereas, in the 4th and 5th experiments, where the mixtures were exposed and the acid allowed to vapourise, the lymph, as stated, was normally active.

Now, when vaccine is thus so obviously unaltered by carbolic acid, and remembering that vaccine is inimical to varioline, if we are to be allowed to reason at all, it seems a just conclusion that, at least to a similar degree, will varioline be unaltered by carbolic acid, and if so, I submit there is a strong presumption that all zymotic poisons will, under the same circumstances, remain active; and not only so, but that carbolic acid rather antisepts—rather preserves than destroys their infecting powers. Moreover, it will be conceded that the conditions of the experiments were highly in favour of carbolic acid, the proportion of that substance present being greatly in excess of the quantity which it is possible to use in practical excremental or aerial disinfection.

According to a short paragraph in the *British Medical Journal* of Feb. 21, 1874, these experiments and views have been confirmed in a rather remarkable manner. It reads thus:—'It is stated in American medical journals that so signal was the failure of carbolic acid as a preventive of yellow fever in New Orleans and Mobile, that suspicion was awakened that its effect was positively injurious, and that it helped to spread the disease.'

Vaccinia, however, as I have shown, can be rendered inert by exposure to certain acid vapours for 24 hours (though I believe a much shorter time would suffice) and otherwise under the same conditions in which it is unaffected by mixture with carbolic acid vapour for 36 hours. All true science harmonises, hence this fact might be inferred from the influence of acids on organic matter already adverted to. In this instance I am disposed to consider their action destructive, as the moisture in lymph is insufficient to permit of fermentation. These vapours, as seen in the table, are sulphurous, nitrous, acetic, and hydrochloric; the chlorine from chloride of lime producing also hydrochloric and hypochlorous vapour. Now, when vaccinia can thus be made inert, I think there are strong reasons for concluding that so will variola, because as vaccinia prevents variola, so that which destroys the infecting power of vaccinia must, of necessity, destroy the infecting power of variola; and moreover, I hold it would be justifiable, in practice, to extend these inferences so as to include all infecta and contagia. Unfortunately, in the present condition of our knowledge, such conclusions cannot be tested practically, we dare not experiment on an unvaccinated person with variolous matter destroyed by inference only; and, as you are aware, the specific toxic principles of the other zymotica have not been isolated.

There are many more bodies, such as acid salts, which are probably antizymotic from their acid reaction; but as this quality is generally weakened by combination with a base, the acids *per se* should always be used. It so happens that hydrochloric acid, besides being as effective as any, is the cheapest of all acids. This substance, as you know, may be had in any quantity, at a price next to nothing. The commercial acid, diluted with about 50 parts of water, is a fair strength for general disinfecting or antizymotic purposes, though it may be used stronger. In all cases of zymotic disease under my care, I advise that the patient's clothes be steeped for 12 hours in such a solution; and in typhoid fever that a portion of the same fluid be put in the vessel which receives the excreta, and before this is disposed of, that it be mixed with more of a stronger acid solution, also that a portion be sent down the closet soil-pipe afterwards. Hydrochloric acid, unlike nitric, has almost no action on lead in the cold.

I will here digress shortly to notice a substance which is very generally recommended as a disinfectant, more especially of typhoid and choleraic excreta, namely, ferrous sulphate. Supposing you add to separate portions of healthy and

enteric fæcal matter a little of an aqueous solution of this salt, you would in the first instance find no change in the aspect or odour of the mixture, while the typhoid excrement would have become a dirty black and free from putrid odour. Now I apprehend it is in consequence of such alterations that the use of ferrous sulphate is advocated in disinfection. What, then, is the rationale of these phenomena? It is this—sulphuretted hydrogen is the chief cause of the fetor of healthy and putrid excrement; at any rate I am sure that bodies which decompose sulphuretted hydrogen can be made to deodorise such matters. But putrid enteric, and stale excrement also contain ammonia, with ammoniaco-magnesian phosphate. Now hydrogen sulphide and ferrous sulphate are only mutually decomposed in alkaline solutions; hence as healthy fæces are acid, no decomposition or deodorisation takes place when ferrous sulphate is added, whereas both ensue with typhoid and decomposing healthy fæces, these being alkaline as already stated. (Experiment shown.) Sulphate of iron, therefore, is not a deodoriser in every case; the medium in which it is to act must be alkaline of itself, or made so. But, moreover, the mere removal of fœtid odour from putrid matter does not imply the destruction or disarming of infecting particles. I have found that ferrous sulphate retards putrefaction to a fair degree, and I think it does so chiefly by appropriating the atmospheric oxygen that would otherwise combine with the organic matter, also by being slightly acid, and not by any caustic action. For the latter reason I should not consider a typhoid stool rendered innocuous, however black or inodorous it had been made by ferrous sulphate, until it was well drenched with a strong acid. In short, sulphate of iron is practically merely a deodoriser, and that only in alkaline solutions.

The experiments with vaccine lymph also prove that to aerial disinfection acids are effectively, largely, and easily applicable; hydrochloric, acetic, sulphurous, and nitrous acids being volatile, plentiful, cheap, and vapourised with facility. In practice I usually advise several platefuls of chloride of lime to be placed in various parts of an infected house, and the ignition of greater or less quantities of sulphur, as the case requires or admits of. Also, that the patient's body be sponged daily with an acid lotion, and acid drinks freely allowed.

I shall now very briefly refer to the action of alkaline substances on animal matter. In the course of the protracted series of experiments already alluded to, and which were made to determine the relative antiseptic powers of above 60 substances, as evinced by their preventing the appearance of fungi

and animalcules in organic fluids with which they were mixed, I frequently observed that several of these bodies seemed rather to accelerate than retard the beginning of putrefaction. It was also noted that their solutions were either alkaline or neutral, from the bodies themselves being either alkalies, or alkaline earths, or their salts. Further investigations confirmed these results, which are in accordance with the fact mentioned by Dr. Gregory in his 'Organic Chemistry,' Ed. 3, 1852, pp. 32, that bodies with an alkaline reaction, to which I may add neutral salts of the alkalies and alkaline earths, when mixed in small proportion with organic matter, hasten its decomposition—a fact which should be remembered by those who recommend the mere dusting of lime on open drains.

Such, however, is not the result if excess of caustic potash be added to a recent solution of animal substance; for although there is an almost instantaneous evolution of putrid odour, yet in a comparatively brief period it disappears, while the fluid remains free from fungi, fœtor, or microzymes, and soon ceases to give a precipitate with nitric acid and heat. Again, if excess of potash be added to a putrid solution of beef juice its microzymes quickly die; its bad odour, after a lengthened period, is gone; while its turbidity is changed to transparency, and it now gives no response to albumen tests.

Regarding the action of alkalies on vaccinia, which substance is itself alkaline, I have only three experiments to submit.

1st. Two tubes of vaccine lymph were mixed with mss. liq. pot., B.P. Twenty-four hours after the mixture, now dried into a film, was moistened with water, and a child vaccinated with it. The operation was *un*successful.

2nd. Two tubes of lymph were mixed with mss. of a mixture consisting of 1 part of liq. pot. in 20 of water. One day after the residual film was moistened with water and a child vaccinated with it. The operation was entirely successful.

3rd. Two tubes of lymph were mixed with mss. of a 1 in 20 solution of liq. pot. and water. The mixture was laid aside for 10 days, to see whether more prolonged contact of the potash and lymph would annul the latter's infecting powers, in accordance with the fact that alkalies hasten the oxidation of organic matter. The remaining film was moistened with water, and a child vaccinated with it. The operation was *un*successful.

The 1st of these experiments shows that the infecting property of lymph may be quickly destroyed by mixture with an excess of potash.

The 2nd proves that a moderate quantity of potash mixed with lymph does not soon annul its infecting powers.

The 3rd shows that if the conditions of the second are prolonged for 10 days, the lymph is made non-infective. From these results it may be justly concluded that variolous and other zymotic poisons would in the same circumstances be affected similarly to the lymph; also, that the other alkalies would act on lymph similarly to the potash, and in like manner on the other zymotica.

The action of acids and alkalies on organic matter may be summed up thus:—Acids added in small proportion to a fresh solution cause it to ferment, and prevent it putrefying. Added in large proportion, they prevent both putrefaction and fermentation. Added in small proportion to a putrid solution, putrescence is arrested and fermescence induced. Added in large proportion to a fermenting or putrid solution, both processes are arrested indefinitely. Vaccinia is quickly made inert by acid vapours.

Alkalies added in small proportion to a fresh solution, hasten putrefaction and prevent fermentation; added in large proportion, they prevent both fermentation and putrefaction; added in small proportion to a fermenting solution, fermescence is arrested and putrescence induced. Potash added in small proportion to putrid solutions, produces no apparent effect; added in excess, putrefaction is soon expended. Potash mixed in large proportion with vaccinia, quickly makes it inert; mixed in moderate proportion and for a short time, it remains active; mixed in moderate proportion for 10 days, it ceases to infect.

In conclusion, it may be stated that special reference to the various doctrines of the immediate causes and nature of putrefaction and of zymosis, and also regarding the *modus operandi* of many well-known disinfectants, has hitherto been purposely avoided. These, though very interesting, consist chiefly of hypothetical data, so abstruse and complex that their consideration would in all probability contribute to no practical result. Nevertheless, this paper would be somewhat incomplete were the apparent modes of operation of disinfectants not, at least, briefly noticed. These I endeavoured to classify, but no arrangement I have made or seen has satisfied me. The following is that of Dr. Letheby submitted to a meeting of medical officers of health held in London last October. He divides disinfectants into four classes, to use his own words, 'according to the manner in which they seem to destroy or prevent the hurtful thing which causes offence or produces disease.' As examples of the first class, he alluded to the effects of cold and dessication, which strengthen the affinities of organic substances, thus enabling them to resist decay. Second.

The coagulation of albuminous matters by alcohol, creosote. The mineral acids, and most mineral salts which thus produce new compounds, not susceptible of organisation or decay. Third. To the oxidizing effects of chlorine, hypochlorous acid, permanganate of potassium, and atmospheric air, aided by water and porous bodies, which hurry on the changes of decomposition and oxidation, so that the particles may quickly arrive at the final stages of decay, and be quickly brought to rest. Fourth. To sulphurous, carbolic, and cresylic acids, and to the volatile oils which are found to have specific powers of disinfection.

I shall not discuss this arrangement further than to remark that the majority of such bodies are capable of acting in more than one of these ways. Also, that the action of a disinfectant depends in some degree on the proportion in which it is mixed with organic matter. But, assuming the relative disinfecting powers of the bodies mentioned as ascertained, the prior statement still holds good. Numerous examples might be cited. I shall give one. Chromic acid is a powerful coagulator of albuminous matters; it has a strong affinity for water (which, I may remark, is considered the *modus operandi* of antiseption by common salt); it is also a strong oxidizer, and therefore deodorant.

I am aware the imperfections of this communication are numerous, for which I plead the great difficulty of the subject, which, however, I trust my remarks will tend to lessen. Two points are worthy of reiteration. 1st. Putrefaction of organic matter may be impeded, arrested, or neutralised, or the odour neutralised or masked, and yet any zymotic poison present, in all probability, be unaffected, conserved, or only made dormant for a short time; in other words, the experiments with carbolic acid and vaccinia show that the use of pure antiseptics as antizymotics is a palpable paradox, preservation being practised and destruction expected.

2nd. The mineral acids are true disinfectants, they prevent putrefaction, they arrest putrefaction, they transform putrefaction into fermentation, they deodorise, and, what is most important, they are highly antizymotic as regards vaccinia, and therefore *à priori* of other contagia and infecta.

On Water used for Domestic Purposes. By M. M. Pattison Muir, F.R.S.E., F.C.S.

THERE is no doubt that the means of supply exercises a potent influence upon the character of water which is used for household purposes. The question as to whether cisterns do or do not contaminate the water stored in them can scarcely be said to have yet received a definite answer. This subject, although so important, has unfortunately for the most part been looked at from a really unscientific point of view. People have said that from the position in which cisterns are placed, from the method used in adapting the system of pipes leading to and from the cisterns, and from the very constitution of the cisterns themselves, there really must be a hurtful action exercised by these cisterns upon water stored in them. But the only means by which we can decide this question is by direct observation of the facts themselves, so as to determine experimentally whether the alleged action takes place or not; and if it does take place, by careful measurement of the action, so as to assign to it its proper importance.

Such a course I have endeavoured to follow in investigating one part of this many-sided problem of cistern contamination.

Our household cisterns are almost invariably lined with lead; now it is known that water does exert a certain solvent action upon lead; here, then, there seems to be a just ground for alarm.

The action of water upon lead varies with (1) the saline constituents of the water, (2) the brightness of the surface of the lead exposed, and (3) the time of exposure. This solvent action may also depend upon other circumstances, but those which I have mentioned are, I think, the main factors.

In my experiments 500c.c. of distilled water were poured into clean flasks, and to each was then added a weighed quantity of a certain salt or salts. Pieces of clean bright lead were then suspended by threads in these solutions, so that the liquid should have free access to all parts of the lead. The flasks were set aside for 25, 48, and 72 hours, at the expiry of each of which periods the amount of lead which had passed into solution was estimated.

Distilled water dissolved 2 parts of lead per million parts of water after 24 hours exposure; after 72 hours the amount of lead in solution had increased to 3 parts per million.

Loch Katrine water dissolved 1 part in 24 hours, the same amount in 48 hours, and 1·5 parts of lead per million of water in 72 hours.

The presence of 1·4 grains of ammonium nitrate per gallon of water greatly increased the solvent action of this water upon lead; after 24 hours 13 parts, and after 72 hours 25 parts of lead per million of water had passed into solution. The presence of such salts as sodium sulphate, potassium or calcium carbonate, calcium chloride, &c., greatly retarded the solvent action of the water upon lead; thus in one experiment with water containing 14 grains of sodium sulphate, 2·8 grains of potassium carbonate, and 7 grains of calcium chloride per gallon, the amount of lead dissolved after 72 hours was equal to only 0·1 parts per million. The conclusion which I am inclined to draw from these and other similar experiments, which I need not here detail, is that, considering the composition of most of our potable waters, and also considering the state of our household cisterns—which state certainly cannot be described by the words bright or clean—there is, generally speaking, little to fear from lead-poisoning brought about by the solvent action of those waters upon these cisterns.

But there is another ground of complaint against the cisterns.

Sewer gases are known to us as one of the most deadly enemies against which we have to fight. Now are not our cisterns, by their very construction, traps set to catch these foul gases, and distribute them over the house on their mission of death? The answer to this question must be twofold; it must tell us (1) whether or not we possess a means of detecting and measuring the amount of sewer gases in water, and (2) whether or not cistern water is actually contaminated by these gases, and if it is, to what extent this contamination proceeds.

In order to answer with a tolerable degree of accuracy the first of these questions, I suspended a clean porcelain basin containing about one litre of distilled water (free from ammonia) covered over with bibulous paper, at a distance of six or eight feet from the surface of a large drain running under South Portland Street. This drain carries off the refuse matter from a large district chiefly occupied by dwelling-houses. It was through the kindness of Mr. Carrick, the master of works at Glasgow, that I was enabled to carry out this experiment. After 96 hours the basin was withdrawn, and the free and albumenoid ammonia in the water estimated by Wanklyn's method, with the following results:

Free ammonia = 0·60 parts per million.
Albumenoid do. = 0·54 „ „

These results clearly show that if water be exposed to the action of sewer gases it quickly becomes largely contaminated

thereby; and that we possess, in the ammonia process, a ready means of detecting and comparatively measuring this contamination.

I now proceeded to test, by means of the method just mentioned, a number of waters taken from cisterns. Mr. Macleod, the Sanitary Inspector for the city, was good enough to let me have samples of water taken from many different houses, some of the better class, others of the lower; and I also myself obtained a considerable number of samples, chiefly from houses in the West End of Glasgow. Without going into details of all measurements, I may state that the amount of free ammonia varied but slightly, averaging 0·02 parts per million of water. Albumenoid ammonia was also very steady, averaging 0·08 parts per million of water.

The amount of nitrogen existing, as nitrates and nitrites, I found to average about 0·3 parts per million.

Now these waters could not be pronounced sewage-contaminated. In the houses from which these waters were taken there was a more or less constant change going on in the water stored in the cistern; water was continually being run off, and fresh water was as continually rushing in to supply the deficiency. But upon measuring the ammonia, &c., in a sample of water taken from a cistern, in a good house in the West End, in which the water had remained almost undisturbed for weeks, a marked difference was discovered.

This water gave 0·085 parts of free ammonia per million, 0·12 parts of albumenoid, and 0·463 parts of nitrogen, as nitrates and nitrites, per million.

Such a water must be pronounced at any rate suspicious; the action of sewer gas begins to be here traceable; and in our ignorance of the amount of such contamination which may be really hurtful, I think we would act wisely in condemning such a water as this.

To this part of the inquiry my experiments then give answer: The influence of sewer gases upon cistern water is not in ordinary cases sufficiently great to be detected by the chemical means at present at our disposal, but whenever the water has been undisturbed for some time in cisterns, then this hurtful action begins to make its presence known; and as we thus learn that the water in a cistern actually does sometimes dissolve sewer gases, we cannot be too careful in doing all in our power to remove even 'the appearance of evil.'

Water Analysis, Past and Present. By J. ALFRED WANKLYN, Corresponding Member of the Royal Bavarian Academy of Science, Public Analyst for Bucks.

NATURAL Water contains more or less mineral matter, which it has dissolved from the soil or earth with which it has come in contact, air and gases derived from the atmosphere, and small quantities of organic matter.

The older water analysis dealt successfully with the mineral, and also with the gaseous constituents, but failed altogether to deal with the organic matter in drinking water. The old method of measuring the organic matter in water was by igniting the solid residue left on evaporating a known volume of water to dryness, the loss on ignition being taken to represent the organic matter contained by the water operated upon. Such measurements of organic matter in water are, however, of no value, inasmuch as loss on ignition is occasioned by many circumstances besides the presence of organic matter. The conversion of nitrates into carbonates causes loss on ignition, and the one or two grains of nitric acid existing in most varieties of drinking waters, cause a loss on ignition, which is far greater than the loss occasioned by the destruction of the organic matter.

All determinations of organic matter in drinking water which date before the year 1867 are to be rejected as necessarily untrustworthy.

In the year 1867 the ammonia process of water analysis was brought out, and the estimation of traces of nitrogenous organic matter in water became a possibility. The diligent application of this process has shown that good drinking water is wondrously free from organic nitrogenous matter; deep spring water sometimes containing less than one part of nitrogenous substance in ten millions of water, and a degree of purity such that two millions of water do not contain more than one part of nitrogenous matter should be reached by every water company.

On the Neglect of Infants in Large Towns, with some Remarks on the Crèche System.[1] By the Rev. J. ELDER CUMMING, D.D., Minister of the Parish of Sandyford, Glasgow.

'WHAT do they do (asked Charles Dickens of the rector of a parish in a large English town)—what do they do with the infants of the mothers who work in the mills?' 'Oh,'

[1] See *Transactions*, 1869. p. 494.

replied the clergyman, 'they bring them to me, and I take care of them—*in the churchyard!*'

This striking sentence from the Biography of Dickens by Mr. Forster may serve as a motto for the present paper on the neglect of infants in our large towns, with some remarks on the Crèche system.

I. That there may be as little misunderstanding of my object as possible, I propose to treat as infants all children under the age of five years. And the fact which forces itself on our attention is the very large mortality of this class, especially in large towns. Taking the Registration figures for the whole of Scotland during ten years ending 1870, I find that 37·56 per cent. of the whole mortality is of children under five. But when we separate the people into the three divisions of insular, mainland rural, and towns (meaning by towns places having at least 10,000 inhabitants), we find that the deaths of infants form in the insular districts only 24·6 per cent.; in the mainland rural, 32·9; and in the towns, 43 per cent. The difference then between 24·6 and 43, or to take the mean of the first two districts, between 29 and 43 per cent., is that which has been called the preventible mortality. In other and preferable words, 14 per cent. of the infantile mortality of towns in Scotland is due to local causes, which might be much modified, if not entirely removed.

The law of Nature is that infants are dependent on, and should be watched by their mothers. This is, above all, true for the first eight or nine months of their lives. But, as a matter of fact, many mothers in large towns are engaged in outdoor occupations for their livelihood and support, which are suspended only for a few days before, and for a few weeks after the birth of children.

That there is a necessity laid on many mothers so to labour is manifest to those who are acquainted with the condition and habits of the poorer population. There are at least five causes which may be said to imply or produce this necessity.

1. The small wages of the father when he is not engaged in any of the regular and well-paid employments of the artisan, but in odd work which brings less than £1 per week.

2. This is aggravated by the frequent occurrence of a large family in conjunction with the small wages already referred to.

3. The pressure of poverty becomes much greater when the father is in broken health. If altogether unable to work, there are means of assistance at hand; but there is a large margin of cases, and these are often the hardest and most difficult to deal with, where health is indifferent, and light

occasional work is possible, but where that is not sufficient to keep a family in decent comfort.

4. The death of a father leaving three or more children under five years of age is another case of frequent occurrence, where the mother must of necessity work for her livelihood. Of course, the Poor Law in such cases gives assistance; but it cannot be denied that the assistance is by no means sufficient by itself to sustain a family, and possibly it would not be right to insist that it should be so, considering all the circumstances which must be taken into account. No doubt also this is but a temporary case of distress, passing away after a few years; but other such cases come in to supply its place, and a constant succession of temporary instances becomes an abiding social evil.

5. Add to these reasons this fifth, that under the excellent compulsory clause in the late Education Act for Scotland, which is being gradually enforced, children between five and thirteen must be sent to school, a fact which operates in two ways to the farther poverty of the family, by the payment of school fees, and by occupying in unremunerative employment the elder children who were either paid for watching the infants of other parents, or who, by attending to their own infant brothers and sisters, set the mother free to work for wages.

These facts may serve to illustrate the necessity which poverty lays upon many mothers of infant children to labour in mills and various other employments, and to show that a legislative measure on the subject, forbidding absolutely such labour, would only deepen the poverty and distress which press on many families. Such an artificial remedy for a natural evil (though at first sight having much to recommend it) would only force into other channels the employment of women. Poverty must have recourse to expedients; necessity disregards law; and honest employment is at least better than theft. Pressing the flood of poverty back by impenetrable gates will force it to find out crannies through which it may leak, and will after all only deepen its rising tide.

II. The neglect of infants arising from the employment of their mothers is found telling upon them in time of health and also of sickness, both of which deserve a few words of explanation.

In health, they are neglected (1.) by the nurses to whom they are entrusted. These I have found to be either old women, who from age or rheumatism are unable to labour themselves, and are unfit to manage infants; or they are children just a few years older than their helpless charges.

Two great evils come from this state of things. Old women are in the habit of drugging the infants to keep them quiet and asleep. The extent to which this goes on in a large town is not generally known. An old woman having charge of two or three infants at once is constantly tempted to give them laudanum or whisky to induce sleep. I have reason to believe that even some of the monthly nurses among the rich are not guiltless of the same habit. I know of a case, where the nurse of a rich man's child confessed to having put a whole glass of whisky into the baby's bottle, and of having given *the whole of it* to the child on an occasion when she had reason to wish the infant to sleep soundly for some time. I know of a second case, where a nurse confessed to having given a quantity of laudanum to an infant, which very nearly ended in death. And I know a third case, where a delicate child, heir to a large property, suddenly died, and where all the symptoms pointed in the same direction. The lesson from all this obviously is, that mothers should attend to their own children, and delegate as little as possible to a nurse's care.

2. The evils to which *child-nurses* subject their infant charges are not less grievous. I have in my eye two cases—one in a large city, and one in a village—where the door was locked on children by the mother when she went to work, and where fire broke out in the room from the children playing with it, the result being in one case the death of two children, and in the other the burning of the house.

3. The last illustration of the neglect of infants when in health that I can mention is, the improper and insufficient food which is given them. This and many other important matters have been well touched on by Dr. Russell, the medical officer of the city of Glasgow, to whom the community is in many ways much indebted. And it is beyond measure surprising that mothers should have so little conception of what is wholesome food and what is all but poisonous for their infants. Only we must make this allowance, that bitter poverty compels them oftentimes to offer food which they know to be deleterious.

The neglect of infants, *when ill*, is of the grossest kind. Here are some of the startling facts.

Very many are sick, and even die without any medical supervision or care. Possibly enough, this may happen even in cases where the parents are in comfortable circumstances. In the best districts of Glasgow, for instance, only 83·5 per cent. of the infants who die are medically certified; and we have reason to believe that medical certificates and medical attendance are nearly co-extensive. Over 16 per cent., therefore, of the

infants who die may be presumed to die so suddenly as to have no medical care in such districts. But when we take the worst and poorest districts in Glasgow, the percentage of infant deaths that are so certified is only 33·5, leaving 66 per cent. of children under five who die without being aided by medical skill. There is at least here a margin of 50 per cent. of neglect in cases of sickness which ends in death.

Much of this neglect is to be accounted for by ignorance that the children are in any danger; where an experienced eye would at once detect disease, the mother sees only sleepiness or discomfort. Much, too, must be attributed to the mistaken remedies administered to sick children under the injudicious advice of neighbours. I have known a pining child, whose constitution was fairly fighting with his illness, who was made by its mother to swallow a glass of rum as a medicine, which finished the poor little fellow in three days. I have known another whose mother left it in her house quite alone, to go into town for yarn to spin at home, locking the door as she went. When she returned, after an hour or two's absence, she found the infant lying dead, where it had been set down—the last hour of its pain and struggle being seen by no human eye.

III. *The Crèche System.*—It is in such circumstances that for some years past a new charitable institution has been carried on called a *Crèche*. The name is the French word for *a manger*, and is redolent of sacred associations; and, as may be guessed from the name, the whole charity is of French origin. For the last thirty years they have been used in different towns in France, where they are sometimes of a semi-public and municipal character. In London, Liverpool, and a few of the large manufacturing towns of England, they have been in existence for a few years. One was tried in Glasgow a few years since without success; a second in Edinburgh, which has been removed into the country; and a third is to be found in Perth. In Glasgow three have been founded within the last ten years. They are on somewhat different principles, as to the age of children, &c., and the writer confines himself to a description of that which is under his own superintendence at No. 39 Sister Street, Carlton. A large room is fitted up as a nursery, surrounded by cots and cradles, and filled with little chairs, toys, &c. A side room is also kept as an extra sleeping-place when required. The children (who are all under five years old) are only admitted after careful inquiry as to the circumstances of their parents, and on payment (in advance) of threepence per day. They are brought in at 7 A.M., visited by their mothers about

1 P.M. for nursing purposes, and removed by 7 P.M. The first process in the morning is a warm bath, after which each child is clothed in a dress belonging to the Crèche, which it wears till it is about to be removed at night, when it resumes its own clothes. A medical man visits the Crèche once a week, superintending the arrangements, and giving directions, whose object is to secure that only children who are free from disease are admitted from time to time. The food given to the children, according to a scale of diet, is also approved by him. Besides the two rooms already referred to, there are a bath-room and a kitchen. The maximum number of children at any one time is twenty, who are taken care of by a matron and two assistants. In summer and warm days, arrangements are being made for some of the children being taken out in turn for an airing in a perambulator. The total annual cost of the institution, including rent, wages, &c., is about 120*l.*, of which about 45*l.* is contributed by the pence paid for admission. The improvement on the health and appearance of the children is very great after a few months. And probably, after a few years' experience, the result in lessening the mortality of infants will be very great. I am not an advocate for having a large Crèche of fifty or sixty children, partly because so many cannot be attended to individually, partly because the circumstances of the parents cannot be so accurately known; and partly because the bringing the children long distances has many evils which need not be specified. A number of small institutions taking up district after district would seem better fitted to meet the evils complained of.

There are several conditions necessary to success:—

1. Such an institution is not meant for the lowest class of mothers, who are not employed in labour, and who are neither able nor willing to pay for their children, and, therefore, it will not succeed, as a rule, in the worst localities.

2. It is not meant for the children of mothers who work at home, and who have the opportunity of attending to their children hour by hour, but is adapted to such classes as labour abroad, including the workers in mills and factories: so that it is in a locality where many such workers live that it should be planted to be successful.

3. For a time, at least, it ought to be connected with a large and systematic mission, of which it should form a part; and, though I think it ought never to be wholly gratuitous, yet it cannot be altogether self-supporting. I found very large sums paid to old women for nursing the children before we took charge of them, amounting in one case, if I remember

right, to tenpence a day for one child; and the sum of threepence, which we have been led to charge, has proved enough to pay for the food of the children and other expenses, except rent and wages.

I have met with two objections to the institution among outsiders.

The one is that it tends to increase improvident marriages, and to facilitate the support of illegitimate children. The subject of illegitimate children has given us a good deal of concern. We have (and I think justly) refused to exclude these systematically from the benefits of the Crèche, believing that some of the most necessitous cases are to be found in that class, and that it may be the truest charity to assist them. But we have dealt with any such applications with very great caution, and, as a matter of fact, have only found it desirable hitherto to admit two cases. I believe, in most instances, the mothers of illegitimate infants find it needful to board them out where they can be taken care of by night as well as by day. As to the encouragement of improvident marriages, the same charges might be made against infirmaries and sick children's hospitals. The fact is that those who contract such unions do not err on far-sighted calculation of advantages for their children, but on a want of all calculation of the future whatever.

The other objection which I have heard urged, is that the Crèche system may lead many mothers to work who would otherwise take charge of their infants at home. I think there is more in this objection than in the former; and it can only be met by careful inquiry into the circumstances of the parents, and the admission of the children of those only who are proper subjects of the charity. There will always be a sufficient number of applicants for admission to give an abundant choice of the most suitable cases.

The advantages which may be fairly claimed for the system are:—*For the infants themselves*, good and suitable food, sufficient warmth, shelter, and ventilation, constant cleanliness, and medical care. *For the mothers*, the effect has come to be that, accustomed to see their children in a state entirely different from what they ever knew before, they make afterwards an effort to keep them so. And for *the public at large*, it may be hoped that an extension of the system would gradually lead to a great decrease in infantine mortality, and to a rapid and decided improvement in the bodily condition and health of the children who are spared.

The Turkish or Hot-Air Bath, in relation to the Social Position, or Condition, or Progress of the Working Class. By R. MONTEITH.

I HAVE been induced to offer a few remarks on the Turkish or Hot-air Bath, in order that a meeting devoted to such objects as yours may not conclude its labours without advertence to means which are within easy grasp for their promotion.

If a general purity of the human frame—if a victory over some of the chief disadvantages of our climate, and over others attending many of our special industries—if economy in the methods of preserving and restoring health be matters interesting to humanity and science—and, finally, if the bodily ease and modest dignity of the working man and his home tend to counteract any one of the prevalent vices—then the cause which I advocate does in truth coincide with almost the whole circumference of the subject which constitutes the *raison d'être* of this Association.

These may seem bold words, but it is not as an individual that I take courage to pronounce them. I do so at the solicitation of many intelligent members of the working classes themselves—men with whom the Turkish bath has been a study; and, what is more to the point, a habit for many years. Preston, Bolton, Stockport, Birmingham, Manchester, and many other centres of English industry, have each its nucleus of eminently intelligent artizans, whose education, though not unaided by books, has been chiefly that afforded by their own lives of skilled labour. Such are not the men to be carried away by words and fancies when the matter in hand is one which touches their own daily comforts and household experience. It is no nostrum of political theory which they have turned to in order to better their condition. Among them are various complexions of politics and religion; but they unite in urging on your notice conclusions which their own bodies and their own weekly bills have recorded for them. Some of them, whom I rejoice to know, are veritable students—masters, indeed, of much that it were well if our senators understood as thoroughly: but on our immediate subject these claim no more authority than they allow to those of their colleagues who only possess good faith and good sense.

Some of these men happening to know that I have, during winter residence in different parts of Europe, put up for my own use and that of friends no fewer than nine Turkish baths, and aware of my intimate connection with the city in which this Congress has now met, have in zeal for their own class, or

rather, for their general welfare, either by separate letters or by documents subscribed in common, urged me not to lose the occasion, but if possible to induce you to listen and make this cause your own.

Having thus, as I trust, diminished the charge of presumption perhaps otherwise impending, I proceed to condense to the uttermost the matter of my brief.

I resist the temptation to adduce the argument of antiquity, or to borrow what has already been so well said by others who have traced the bath from times primeval to its use by those whom we emphatically call 'the men of Rome'—the race whose severe manners, iron frames, and iron wills plead better in its behalf, during some centuries at least, than even the splendid intellects and beautiful forms of Greece. Those architectural wonders which attest the daily use of the bath by athlete and philosopher, by ruler and by ruled, must be simply passed by. Suffice it to say, that Greece and Rome ran their careers under a systematic treatment of the body almost the direct contrary of ours. Of that system the bath of heated air was the fundamental feature; in other words, the very bath of which my clients have become possessed, and of which they entreat you to become the patrons.

But it is well to observe that this species of bath has obtained the name by which it is now popularly known in this country, by reason of its having been adopted from those Romans by another people, who, in the degenerate days of the former, succeeded to the Eastern parts of their empire; but who did not on that account despise this part of their customs, but made it their own. I speak of the Turkish tribe who founded the Ottoman Empire, and by whom alone was the Roman method of bathing practised until a very recent period. It was an Englishman, who had lived amongst the Turks, who first conceived the idea of obtaining for his own countrymen the advantages of this ancient institution; and who, having first given a most complete description of the edifice, the process to be employed in it, and the benefits to be thereby obtained, in one of his books of travel, but without having thereby succeeded in inducing anyone to put the description into practice, afterwards himself constructed not one only, but many baths, for himself and others, and thus became the introducer of the old Roman and present Turkish bath into Europe. It is scarcely necessary for me to say that I refer to Mr. Urquhart.[1]

[1] Travelled Easterns assert that the bath constructed by that gentleman in Jermyn Street, London, is the most perfect example of the kind in existence.

I must be brief, even on the simply medical side of the subject. It is true that scientific knowledge of the nature of the blood, of the action of the lungs, of the texture and function of the skin with its many miles of pore, affords overpowering *à priori* arguments which correspond precisely with the results of bath experience. Chemical analysis exhibits what in various cases are the mischiefs which can be happily eliminated from the system without a shadow of suffering, through the energised operation of those miles of external escape which we leave torpid and shut up. The microscope reveals the germs of terrible disease conveyed and deposited by vein and artery throughout the body, and suggests the operation, actually performed by the bath, of washing clean the blood itself. But I dare not indulge in what would be, after all on my part, little else than quotation from scientific authors, or from narratives, interesting when given in detail, but bald if otherwise presented.

A few references may, however, be pardoned. Among the authorities to whom I would refer those disposed to pursue the subject, I would specially name Sir John Fife, long at the head of the great infirmary of Newcastle, and Dr. Leared, of the London Consumptive Hospital. The former edited that remarkable work, taken from the writings of Mr. Urquhart, 'The Manual of the Bath,' in which he speaks of the great results obtained under his eyes by its use, and of the diminution of time and cost in restoring many hundreds of working men to their families and employments. In that work he gives his sanction to the use of the hot-air bath as an artificial climate—as a substitute for exercise where exercise is difficult—for its action on acute, chronic, and epidemic disorders—its faculty of arresting consumption, and preventing the diseases of children—for its operation on insanity and the most protracted cases of mental depression and sleeplessness—its power to extract poisons, the animal and mineral included—its facilitation of child-birth—its effects on the working power of both body and mind, on muscle, on milk, and on progeny. In addition, it contains a multitude of facts as to its application to all the live stock of stable or of farm.

I have before me while writing a list of close on a hundred diseases over which there is recorded proof that the bath exer-

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Tradition and science have there achieved a triumph impossible for either alone. Rank and wealth assemble hourly at that shrine, and, taking the interest paid on shares with the sum set apart for sinking fund, the enterprise is now paying some 20 per cent. Yet neither peer nor commoner frequenting it has thought, 'How is this experience to be utilised for the multitudes around me?'

cises a potent control. Corroborations by medical men have crowded on me. One experienced friend in the profession, looking forward to be operated on for cataract, has had the happiness to escape by the insensible disappearance of the disease through a brief course of the bath. Another has begged me not to omit mention of his victory through its means over a confirmed and otherwise hopeless case of 'Bright's Disease.' That patient was admitted into Lanark Hospital (which by-the-bye was founded on the principles advocated by my friend the late Sir James Simpson, its patron till his death). There the patient had the benefit of the bath, and he is now a hale agricultural labourer in my own neighbourhood. Dr. Adams is more than willing to be referred to. Dr. Leared is no less explicit regarding lung disease. Dr. Lockhart Robertson, Dr. Latham, and many more, speak in the same way of effects which time absolutely forbids my relating. But I cannot help mentioning that only the other day I received by private letter details of rapid depoisoning in the bath in a case of hydrophobia—the sufferer a lady of my own acquaintance. All the known symptoms had been developed, and death seemed inevitable, as it proved in another instance, from the bite of the same animal.

The most virulent fevers yield to the higher heats. True Asiatic cholera has been subdued in like manner. Experience of the bath for animals in my own Home Farms confirms that of Mr. Scriven on a much larger scale, as given in his interesting little treatise. On three different occasions I have had cows at the point of death through milk-fever. In each case the patient had to be all but carried from the byre to the adjoining bath-house, and in all three cases the cure was singularly rapid; in one it was complete within a few hours.

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By the strange perversity the original population of the Greek Islands have abandoned the bath of antiquity. Their conquerors saw, appreciated, and practised it, and have persevered in doing so to this day. These do not know what consumption is. The former, dwelling on the same spots, are its frequent prey.

The bath, which did not make the Greeks languid nor the Romans weak, still makes the street porter of Constantinople a proverb for strength and endurance. I have watched him with wonder on the steep slopes and in the precipitous lanes which overlook the Golden Horn. They are the effective substitutes for both machines and beasts of burden. No men bear such weights for such distances; and none more value the bath,

unless it be the Tartar courier on his sleepless rides of hundreds of miles—only accomplished by occasional transfer from his saddle to the bath of some village in his course.

As to cases of mental malady, I can only refer those who care to pursue the subject to the medical gentlemen connected with the institutions of Hayward's Heath, the Sussex County Hospital, and Colney Hatch.

So much for the curative division of the subject.

As to the bath as a prophylactic, the prevention of consumption has been already stated; but I must also adduce that of immunity from the true Oriental plague, which was enjoyed by a numerous household in the very jaws of infection and surrounded by the dead and dying. Incessant use of the bath at a high heat did in this instance precisely that which exposure to extreme furnace heat and constant perspiration do for the men most exposed to the deadly exhalation of copper works. In such neighbourhoods all organic life withers away, while those that most imbibe the poison at the very fountain-head survive in health—because it is discharged through their ever-open pores so soon as it enters the system.

I greatly regret to have to curtail this topic, abounding as it does in matter affecting daily domestic life. Suffice it to say that I entirely omit a wide range of facts which regard the uses of the bath for the better and more susceptible half of the human family. I can only say that science and observation render credible the old tradition that Mahomet's original hostility to the bath—as being what he called a Syrian luxury—was overcome only by the mass of evidence brought before him at the instance of the female sex.

We must now approach the social aspects of our case, which have indeed already had several incidental lights thrown on them.

Were the hot-air bath a cure or a prophylactic merely, as medicines or surgical operations may be so, I should already have presented a good case. But my aim is to suggest the question, What is the value of the bath as affecting the practical life of the multitude and the spirit of society?

Permit the friends whom I represent to offer you to-day in few words their experience. They say, 'We are men who cannot migrate to Madeira or to Egypt. You who are rich may go to climates, and in going find a thousand charms and interests besides. But we are no longer subjected to so overwhelming an inequality of fate. We have been helped in our need by a benefaction beyond price, and while you go to climate we bid climate come to us. Nay, we can vary it at

our need, and, while regulating, bid it abide with us. You can leave labours, duties, and responsibilities, to seek skies which cheer, but which rarely arrest disease which has seriously set in, and tell at best on only a very few kinds. This escape from life at home may be a pleasure and a profit, or it may be a pain and a grievous sacrifice—in either case it is possible for but the few. The balance is in our favour. We can read about what you see, while you cannot by unlimited travel find that main object of your search, which we possess within a few streets of our dwellings, and many of us within our own humble homes. We command every degree of warmth from that of Cannes to that of Nubia, and from smoky lanes can pass as it were at will into the antechambers of the Sun. Thus we preserve health, thus we mitigate or get quit of pain, and thus we obtain cures which no change of latitude could touch, which no thousands spent in locomotion could alleviate. And this we do without ceasing to be among our friends, without depriving our country of our labour, almost without cost, and without one sting of self-reproach for leaving the natural sphere of duty.'

I hereby put into a condensed shape that which I have heard from those concerned—either by word of mouth or by letter. If but half of it be true, has there not been an event among us—a something not the least of our epoch? Why should men be enthusiastic in content without solid ground? Is this the habit of our times? Is not grievance considered capital, and are not deprivations the usual topics of the rhetoric addressed to you? But here are working men proclaiming a source of happiness, nay, as things at present stand, an inequality in their favour. But it is only in order to diffuse a benefit already tested that they speak. There is neither envy nor accusation in a word they utter, or other zeal than to extend a benefit.

These benefits are obtained either by frequenting public hammams of considerable dimensions at certain hours of lower rate, or by using smaller ones to which they are the chief contributors; or, best in some respects, some corner in their own houses partitioned off and fitted up at a cost of two or three pounds, where whatever members of the family need cure or refreshment can find them at will. Of these last there are, I am told, some forty or fifty. But in whatever form employed, testimonies abound as to prompt escapes from illness which, in the ordinary run, would have laid them up for long periods, and of men and women back at work who might never have earned another penny.

I hasten to one especial fact attested to me, and I crave

your recollection of it should all else be rejected or forgotten.

It seems certain that the nervous depression—the '*malasie*'—which has so large a share in goading to intemperance, has in some instances been so relieved by the depoisoning process of the hot-air bath, that the morai sense, previously unequal to the effort, has been able to obtain the victory over inveterate habit. I am assured that there are families now prosperous and at peace, where misery, degradation, and discord were once the normal state. Nor need this surprise. It is generally acknowledged that much of the existing intemperance is not so much the pursuit of a pleasure as a flight from anguish. Whether resulting from the vice itself, or from other conditions, the craving is for escape from misery. The temptation is irresistible, and when the fire-water has relieved for a moment, the necessity returns with fiercer talon on its prey.

Everyone ponders the statistics of our intemperance, and every one asks what can be done to save the millions who are on the slope towards such downfall. It would seem that here there is something that can be done. If it is not everything, that is no reason for disregarding it.

To diminish in some degree an overpowering temptation—pleasurably to occupy certain portions of time otherwise fatally given up to vice—and in doing so to bestow cleanliness, and restore health and self-respect—such are the claims of the revived bath of antiquity to be taken up as a method of somewhat arresting the scourge of intemperance. We claim for it at least a fair place among the many efforts made.

Take into account our climate. Out of the myriads half-clothed, their raiments soaked in wet as they pass through fog and sleet, the dark sky suggesting doom, nerves and brains sodden in alcohol, the whole being gnawed by undefinable distress—how many can turn their steps towards any scene in the remotest degree capable of competing with the attractions of the spirit shop ? The glowing lights, the warmth within, and the something like genial human intercourse, would suffice of themselves to draw irresistibly yon shivering form towards the gaudy portal—independently of the expected stimulant. It is simply to exchange every form of depression for comfort and delight.

Could we but help to turn the scale of that vacillating will ! Alas ! Reason can do nothing, nor Religion hope for more than a few faint throes of penitence at the closing scene.

Benevolence has already made efforts in the direction I now indicate. All honour to them, and all success attend

them. But I claim—with those for whom I speak—for the propagation of the hot-air bath a special fitness for the great purpose in view. The reading-room, the smoking-room, the temperance beverages—all the devices whereby to fill the hours otherwise given to the public-house—can be most easily combined with this, the only method of attaining cleanliness.

My friends tell me of books and magazines supplied in the rooms attached to the hot rooms—of their tea, coffee, and chocolate—of their cool sherbets, their chess and other quiet games, and, under fit regulation, their pipes. Not least do they seem to value the opportunity for conversation with those whose habits they can respect, and where the vulgarity of public-house manners is unknown. All this rational enjoyment, all this sense of comfort and restoration, all this absolute and perfect cleanliness are attained, and this curative process effected, at a cost well within the ordinary workman's means. The time so spent evokes no subsequent domestic discord. Content, good temper, and propriety are the qualities brought back to home from the bath.

My conclusion approaches. I have spoken of an absolute and perfect cleanliness. The Englishman of the higher ranks is proud of his daily ablutions in cold water; his tub or shower-bath in the morning, followed by the bracing towel; his tepid wash after the hunting-field or the moor, and again his shock of cold before bed. Considering the habits in these respects of the mass of Europeans, he may cherish some comparative self-approval. But how many are these out of a nation? Would it not reward the labour of a life to raise a whole people to such a grade of health-giving propriety, and to diffuse through all the mutual respect arising from equal merit in so essential a feature of existence?

We have to avow a still bolder philanthropic ambition. We are not content to place the artizan, or the humblest of the poor, on a level as to his person, his health, and his self-respect, with the highest class in the land. Far more can be done—and done at a stride. The British gentleman is clean in a sense, but a very low one. He is not clean as those for whom I speak to-day are clean—those artizans and working men for whom Antiquity has been revived and the Tropics brought to their doors. The British gentleman is not clean according to the standard of the poorest of ancient Rome, or of so much of the present East as has, in this matter, inherited Roman ways. We have all heard of the inside and the outside of the platter, and the expression, without comment, suffices for our purpose. The long miles of pores have not even

weekly discharged their sewage. His surface may be like that of a marble Apollo; but internally his channels are as the waters of the Clyde at Broomielaw, while those of an habitual bather are as the streams which reach us from Loch Katrine.[1]

The extraordinary fact remains that our object of apparently inordinate ambition is incalculably more easy of attainment than the very low flight generally proposed. I repeat it. It is easier, and very much easier, to make our poorer millions greatly to surpass in bodily cleanliness the present standard of the rich, than it is merely to raise them to that standard.

The barriers to success with the million are, by ordinary methods, insuperable. First, as already shown, they will not consent to the cold bath, and they cannot afford the tepid. Four-fifths of the British year forbid the one, and neither can effect the purpose. His cold plunge or douche is a daily act of courage to the rich man, although his body is invigorated with food and fresh air, and fire and clothing are at command. Further, a half-hour of soaking in tepid water, using the already dirtied molecules of liquid twenty times over, will neither clean the bather nor send him forth in a state to face a walk home in average Scottish weather, with or without an umbrella. And how are the troughs to be numerous enough, how to be filled and refilled, except at a cost of water, and for the warm baths, of coal, which must render the poor man's visits few indeed and far between?

But air can be heated at a far different price. It requires no pump or aqueduct to bring it, and it heats at an immeasurably lower consumption of fuel. Again, the animal frame can endure, nay, find pleasure, in degrees of heat from air which would torture or destroy in water. So antiquity 'overtook' the washing of the people with not a hundredth part of our science to show how it was that they were right. We have their example, and our own science, and an immense deal of benevolence, both of talk and intention, and yet our millions are as we see them. They know of no other bathing under

[1] A friend of mine, subject to gout and various ills, once amused himself with collecting the drops distilled from him in the hot-air bath during an incipient attack. They cooled into crystals, which he sent a distant journey to some who might be edified. Again he did the same by the potent remedies which he was condemned to swallow. These were drawn out in the same manner, and the deposits sent off for analysis. What would have been his state if confined to the usual formalities of what we call washing? All that he had gathered for the chemist would have been retained by liver or kidney, and his tissues would have become the dead-letter office of what he had extracted and sent off by post.

roof except that in solitary troughs, or among masses of other human flesh immersed in a common vat. They know of it only as dear, uncomfortable, and dreary—and, in short, impossible.

Contrast that with the method my working friends have begged me to describe and plead for.

By it cure, cleanliness, and comfort are united. Every adjunct is inviting. The glow of the heated chamber is a cheap paradise. The full leisure time can be spent in them and those adjoining, movement is free, intercourse easy. The final wash by a skilled attendant is, in itself, better than all other baths.

These arts—to wit those of shampooing and applying the hair-glove—many of my working friends have learned for themselves, and thus know how to assist each other in a way equally productive of friendship and economy.

One final word, but an important one. I am informed that in nothing do these men more entertain an honest pride than the contrast which their baths present in every feature of manners to the ways of the public-house.

I have letters which dwell on this subject with minuteness. And yet they claim no praise, because it all comes with but little effort. Every circumstance is different. The loud tongue of the one comes from the heated foolish brain, and conscious degradation ruins rational intercourse. In the other quiet cheerfulness is the standard, rest to body and mind a chief object, and those who coming as neophytes transgress those boundaries, without exception, quickly learn to adopt the unwritten rule, and maintain the spirit of the place. For myself I must declare that all of these men whom I have met personally have invariably struck me as living proofs of how entirely manual labour is consistent with true refinement.

That while the bath extends it may preserve these its present merits, is one motive for asking you to assist in the extension. Without this spirit, this consciousness of a moralising and elevating purpose, it would have many a claim on the philanthropist; but it would not be the gift to Britain which I trust its resurrection is to prove. Up to the present moment health, enjoyment, manners, and self-improvement have for the most part gone hand-in-hand in this great attempt. But there is need to save it from mere speculation. An advertisement I read the other day shows how vulgarity, mendacity, and ostentation may degrade an otherwise useful effort. If the bath be not made to elevate a declining epoch, the manners of the epoch will extinguish it.

For these reasons the bath, as we understand it, has to eschew every meretricious decoration. It has to be clean as the bodies are meant to be which issue from it. Its beauty must be simple, its dignity that of order and quiet; no tawdry gilding, nothing that is false in substance or look; no mirror, but what may suffice for the merest necessities of the toilet. We aim at perfect bodily purity for the millions of this land, and at all that corresponds to that ideal in manners and in mind. So shall both high and low be elevated, intercourse of ranks be made possible, discords softened, content and well-being extended. Such are the objects indicated in the heading of this paper, and such the result which we are convinced is possible.

MISCELLANEOUS.

Mr. Sheriff SPENS, of Hamilton, contributed a paper on 'Sanitary Inspectors and Sanitary Inspection; with reference to the Amendment of the Public Health (Scotland) Act.'[1] He submitted four general propositions as to the advisability of (1) Qualifications of sanitary inspectors being raised; (2) their duties being made more definite and extensive; (3) no other offices being held by sanitary inspectors, with certain exceptions; and (4), the salaries being adequate to the qualifications required and proper discharge of duties of office. He suggested —(1) As to the qualifications to be required of sanitary inspectors, that they should be men of fair education, able to write clear reports, and keep distinct records of the results of their daily work in the way of inspection; that they should have a practical knowledge of hygiene, including a thorough understanding of drainage, trapping, ventilation, &c., sufficient acquaintance with chemistry to analyse water, and to see to the proper disinfection of houses, clothing, &c. (2) As to the method of testing qualifications—viz. by examiners appointed by Board of Supervision, to whom fixed fees should be payable by candidate wishing to qualify for office of sanitary inspector. (3) As to whether it should not be delegated to Board of Supervision to make appointments, local men being exposed to local influences and prejudices. Speaking to his suggestions as to the duties to be required of sanitary inspectors, Sheriff Spens pointed out that even these could not possibly be ex-

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[1] This paper is printed at length in the *Scottish Law Magazine and Journal of Jurisprudence* for November 1874.

pected to be discharged efficiently when salaries were almost nominal. He submitted the following projected new duties:—(1) Systematic inspection of every house in districts periodically, or within certain fixed periods, outwardly and inwardly, special reference being had to drainage and water supply. (2) That provisions as to common lodging-houses should apply to all houses *quoad* overcrowding; and no lodgers should be permitted in any cases where overcrowding exists, and sanitary inspectors should be entitled to prohibit it in such cases. (3) Heads of households should give notice of every case of certain infectious diseases occurring in their households to sanitary inspectors, and if children of same family attending school, notice of that fact—children to be detained from school till certificate is given by sanitary inspector. (4) That inspectors should see that children under six months old imported into the district have been vaccinated—and he suggested the advisability of clause being inserted in Vaccination Act to meet the cases of parents flitting from one registration district to another with children under six months old unvaccinated. (5) If this could be made possible, that the sanitary inspectors should be the instrument of removing to some place of safety children in the overcrowded houses of the poor when deadly epidemic disease has broken out. (6) In Hamilton district frequent ejections of large bodies of miners from their houses took place. Sanitary inspectors should have *locus standi* to appear in these cases, at all events where epidemic disease is prevalent, so that the Sheriff may take precaution to avoid spreading infection among the public. (7) That it should be compulsory on local authorities to provide apparatus for disinfecting clothing, &c., while only permissive at present, and that it should be sanitary inspectors' duty to see as to disinfection in all cases of infectious diseases occurring in the district. The remarks he had made had been chiefly directed to parochial and small burghal districts, and not to large cities like Edinburgh and Glasgow; but such cities were certainly in no less need of more definite sanitary legislation than the rural districts, although he believed, as a rule, there was greater activity and zeal displayed in them in carrying out existing powers of inspection. Probably it would be generally admitted that the present system of appointment of untrained men was a defective one, and the chief objections that might be urged against his proposition, or analogous ones, mainly resolved themselves into two—first, that to carry out properly such proposed sanitary regulations and inspections would involve an interference with the liberty of the subject that would

be intolerable; and second, that the expense which would be occasioned would be an enormous tax on the ratepayer. He admitted that it was necessary that great discretion and moderation should be exercised in the conduct of such extensive sanitary labours as those suggested. But it was neither logic nor anything else to argue that mere annoyance to an individual now and then should weigh for one moment in the balance against the desolation, and ruin, and misery that might, and constantly did, ensue from epidemics and neglect of ordinary sanitary precautions. Mere annoyance to the individual could never be allowed to stand against the general welfare of the community. Regarding the objection as to expense, he denied the right of the public to regard the matter from a pecuniary point of view at all. No outcry should be raised on the score of expense in carrying out what was essential to the social well-being of the community. He had no hesitation in saying that, for his part, he believed that quite as much might be done for the moral and intellectual improvement of the community by sanitary legislation, properly carried out, as could be effected by Education Acts, while the physical misery and deterioration that might be saved and arrested thereby were incalculable, affecting not only existing generations, but those yet unborn.

Mr. Kenneth M. Macleod, the Sanitary Inspector of Glasgow, read a paper on 'Some Shortcomings of the Public Health (Scotland) Act, 1867, and the Statutory Powers requisite to amend it.' He said it was no unfriendly spirit, but with a full appreciation of the excellencies of the Act, that he wished to draw attention to some shortcomings in this Act—to defects which experience in its working had disclosed, and which stood in the way of a full attainment of its intended and proper aims. He pointed out and illustrated five shortcomings of the Act. The first drawback to the efficient working of the Act was its permissive character; the second was the constitution of the Local Authority; the third was found in that stipulation in its 16th section which made it necessary to prove individual nuisances 'injurious to health;' a fourth, and very serious shortcoming, was the absence of power to anticipate a nuisance by giving the Local Authority control over the plans of proposed buildings; and the last shortcoming he noticed was the tedious process of enforcement provided by the Act. Mr. Macleod then stated the powers requisite to amend it. He said the first amendment required is to make the duties imposed on Local Authorities compulsory in every district. Sanitary

action, to be safe and complete, must be co-operative and united. It is small gain for public health that my district or dwelling-place is put into proper sanitary order if my neighbour's is left as it was. A defective drain in my neighbour's property will bring disease and death into mine. The want of hospital accommodation in the next district exposes the surrounding districts to contagion. In the second place, we require a special and distinct board, whose attention shall not be distracted by other duties, to carry out the provisions of the Act. The third power required is that standards of designs for dwellings, workshops, manufactories, schools, &c., be established and substituted as the tests for healthful habitation and use, instead of making it necessary to prove individually those 'injurious to health.' The fourth power I ask is that sanitary boards be empowered to examine and correct the plans of every new building proposed to be erected, and that buildings erected without their sanction and approval shall be deemed illegal and unfit for habitation or use. The fifth power I ask is that the right of adjudicature under the Act be conferred on a court to be formed by members of the Local Authority, whose decision in all cases not involving an outlay for remedy or removal, say, of one hundred pounds, shall be final; but in cases involving a larger sum be subject to appeal to the Board of Supervision, whose decision shall be final. An Act amended in the five particulars which I have pointed out might still not be perfection, but it would be a great start towards it. The two great difficulties, no doubt, in the way of our obtaining these amendments, will be jealousy of compulsory power and reluctance to multiply public boards. With respect to the first difficulty, it may be said that permissive legislation has its own legitimate sphere, and in this free country its range is, and ought to be, large. But the teaching of experience is that it is inefficient in sanitary matters, and that it requires compulsory powers to carry out in a thorough way the intentions of a Public Health Act. With respect to the second difficulty, it may be said that the trouble we have so recently had in the establishment of school boards may stand in the way of our getting separate health boards. But success in the attempt to get them will repay all the trouble we can be at. It is impossible to go on disputing cases as we are doing. I believe the constitution of a board specially appointed by the State to guard the public health would attract gentlemen of all professions into its membership. It would open up a sphere of public life in which the most earnest patriotism might find a happy vent. To work on such a board would be to co-operate in the

endeavour to remove the miseries which disease brings into communities, to improve the general health of the country, and to free the lives and homes of both rich and poor from shadows beneath which they need never be.

Mr. W. J. COOPER, of London, read a paper 'On the Epidemic in Golden Square.' It referred to a statement by Macaulay to the effect that east of Regent Street, opposite Conduit Street, there was a field not to be passed without a shudder by any Londoner, because there, in the time of the London Plague of the seventeenth century, a pit had been dug into which the dead carts had nightly shot corpses by the score. In the spring of 1854 excavations were made on the spot where the plague pit had been dug, and that hoard of infection was laid out for months to breathe out contagion. Mr. Simon, medical officer of the Privy Council, warned the authorities of the consequences that might result from their acts. His warnings were, however, disregarded, and the horrors of the plague of London were again revived in the district. The air of the district, always more or less polluted by sewer gas from the drains, became further tainted by the poisonous and infectious emanations from the plague pit; and the cholera, happening to visit London at the moment, seized upon the spot as the most favourable for the development and encouragement of its fatal germs. Broad Street, Golden Square, is a wide street, and at the time of this visitation contained, as now, about sixty houses, with an average of 35 inhabitants in each house. In this street the deaths amounted to at least 180, carried off almost instantaneously in three or four days. The dead could not be buried with ordinary decency; vans containing quantities of coffins deposited their burdens in the store-yard of St. James's Parish. People were suddenly attacked and carried off in a few hours, as if by some virulent poison, and lay gasping as if for lack of the power of respiration. It was remarkable that only two houses in Broad Street, Golden Square, escaped the visitation, and these houses had drains properly trapped, which was not the case with the other houses in the street. Two houses in Marshall Street, which were exempted from attacks, were also properly protected in this respect from the inroads of sewer emanations. The fact was also noteworthy that the people living in the lower storeys of the houses suffered most, the inhabitants of the upper storeys escaping almost entirely, the mortality decreasing according to the greater elevation of the inhabitants from the level of the street. He (Mr. Cooper) was convinced that the fact of the opening of the plague pit and

other sewer excavations so lowered the vital tone of the inhabitants that they fell easy victims to the cholera poison and its powerful allies, the products of decomposition. He concluded by insisting that immediate and active interference on the part of the Legislature was required to give power to competent and independent medical officers, to enable them to act in cases of emergency when the public health was jeopardised.

A paper was read by Dr. ROBERT ELLIOT, of Carlisle, 'On Infant Mortality in Carlisle during the seventeen years, from 1857 to 1873 inclusive.' Having referred to the negligence and cruelty of parents, and the pernicious system of nursing out and baby farming, he said that the direct loss is great. In the case of none of our domestic cattle, nor in the case of our poultry, would wholesale loss of the young before they had made any return for the time and money bestowed on them be tolerated, under the head of pecuniary loss or loss of money's worth, as in this great and for the most part unnecessary and unnatural loss of infants.

That the annual loss is unnecessary is shown by the wide difference in the mortality lists of infants whose parents are careful and dutiful, and especially of infants whose parents are in comfortable circumstances.

In Carlisle the population is more than 32,000, and only increases at the general rate of England generally; and assuming the population from (and including) 1857 to (and including) 1873, that is for seventeen years, to be 30,000, we find that the deaths, under six years of age, have during the whole period been 5,474, or nearly 5,500. The deaths from six to sixteen years have, during the same time, been 654; and the deaths at all other ages, above sixteen years of age, have been 6,332. It will be seen that even these tables, which include the very poorest classes, in a small city where the cotton manufacture is the chief or staple trade, is more favourable to insurance prohibition than the belief generally entertained of the death-rate of children under six years of age. For these facts I am indebted to Mr. Bell, the intelligent and reliable meteorologist and statistician at the Carlisle Cemetery, where the records have been carefully kept only since January 1, 1857. The mortality of all under six years of age, in Carlisle, during seventeen years, in a population averaging about 30,000, averages thus 322 each year. The annual average of all deaths in the seventeen years is 733.

A paper 'On our Paramount Duty to provide Wholesome

and Pure Recreation and Amusement for the People, and the Dire Results and Dangers which attend our neglect of it,' was read by Mr. FRANCIS FULLER, of London. He said that the main object of those who purchased the Crystal Palace and transferred it to its site at Sydenham was to allow the people one opportunity of escaping from the vile haunts of dissipation in which mind and morals, soul and body, are destroyed, and to enjoy recreation in its true and proper acceptation. It is a great fact—a practical proof—that the people, if encouraged and assisted by those who are able to serve them, would choose the good before the evil, and turn their opportunities to account; that whilst thirty millions and upwards have visited the Palace, not one visitor in a million has appeared on the police reports on a charge of being drunk and disorderly, though the original programme of the institution has—with what effect I need not here discuss—been so far departed from that wine, beer, and spirits are sold for consumption in the establishment, and dancing is one of the chief enjoyments.

No more satisfactory indication need be required that with means of exercise and rational recreation within reach, the people, with rare exceptions, would not sodden themselves with drink even if it were placed before them in the attractive shape which rules at the Crystal Palace; but the case is different when the inborn universal craving for relaxation, amusement, and variation has no vent save in places where drink is in the ascendant, sometimes accompanied by questionable music, nauseous performances, and coarse songs. The experience of the Crystal Palace and some other establishments of a smaller scale leaves no doubt that if the people had access to good and pure amusement the excise revenue, approaching thirty millions per annum, would suffer; and many persons, whose abstract good intentions I am not here to dispute, but who act from want of reflection, withhold practical sympathy from movements intended to give the masses wholesome recreation.

This question of popular play and amusement is really amongst the most pressing, as well as most important, with which we have to deal. We cannot postpone it without danger to ourselves. If only on the pure (or impure) ground of selfishness, we must grapple with it. Its bearings go to the root of the social tree—to the deepest foundations of the political fabric. Looking beyond the restricted vista, within which great subjects are sometimes unwisely narrowed, it would be seen that probably the primary cause why our jails, asylums, and workhouses are so full, and why, notwithstanding the peculiar prosperity of the last few years, crime stalks so ram-

pantly—generally in the neighbourhood of abject misery—is because the people have neither been taught nor enabled to play and recreate properly.

Neglect of our countrymen's pleasures have devolved on us a great deal to undo as well as to do. Let us provide them with amusements of the right sort; let us take away the temptation—the cruel compulsion (for it is substantially this) —which, as it were, forces them to seek enjoyment through the only resorts—coarse, low, and base—in which they can at present be obtained; and we shall find that the better influences will gradually displace the bad, even amongst those whom it it is the custom to designate the depraved and irreclaimable classes.

The people are divided into two classes: namely, the upper thousands and the lower millions; the former being blest with vast wealth and enormous power both in and out of Parliament. It therefore becomes their duty to look ahead, and legislate in such a manner as that the latter shall have free scope to improve their condition in every possible way, and at the same time be guarded as far as practicable from harm. The upper thousands have decent homes; they are not surrounded with temptations to vice in its multifarious forms, without being able to escape from it; and they can recreate and amuse themselves in a pure and instructive manner, so as to retain health of body and vigour of mind. Would it not be wise for the upper thousands to secure these necessary healthful conditions for the lower millions? In case the upper thousands affect to say they don't know how it is to be accomplished, let them empower the Board of Works to purchase house property in low and bad neighbourhoods, which they can do at prices which will yield from 10 or 12 per cent. for the money; and to build thereon decent homes, which, as Lord Rosebery has shown, pay 6 per cent. on the outlay, to accomplish which the Board of Works can raise any money they require at 4, or at most 4½ per cent. The Board of Works can, therefore, by aid of Parliament, reform the dwellings of the poor; they can make their homes comfortable and healthful; they can cleanse the plague spots and beautify the ugliest parts of our metropolis on a solid, sound, commercial basis; and while doing this they can so arrange their buildings as to create open spaces for trees, flowers, and fountains, as to make the district a pleasure to the visitor and comfort to the inhabitants and surrounding districts.

In order to show the necessity for giving the masses places of pure and wholesome recreation, Colonel Henderson, the

SAN FRANCISCO, CAL.

Chief Commissioner of Police in London, in a recent official Report to the Government, said:—

'Drunkenness and disorder are on the increase in London; 'but at the Crystal Palace, where upwards of two millions of 'people have visited this year, not a single case of drunkenness 'or disorder has occurred.'

To which let me add, as one of the founders of the Crystal Palace, when we asked for a Royal Charter of Incorporation, it was granted on condition that we should form conservatories, park, and museum for the illustration of the arts, sciences and manufactures, and the cultivation of a refined taste among all classes of the community.

Twenty-two years of experience show how the millions appreciate such a place of pure and wholesome recreation and refinement. More people have visited the Palace than there are in England and Scotland together. Upwards of thirty millions have been there, and not one in a million have been reported by the police as having been drunk or disorderly.

Miss Rose Adams read a paper on 'The Ladies' Sanitary Association,'[1] which gave an account of the origin and growth of the society, the object of which was to diffuse a knowledge of the laws of health, by means of publications, public meetings, and lectures by men of eminence on physiology, chemistry, health, and cooking. The Association had been affiliated with the Social Science Association, and had devoted itself to the improvement of the sanitary condition of the poorer classes. The committee had encouraged window gardening and flower shows, had given dinners to 298,050 destitute children, and had done all in their power to promote sanitary reform. The paper next referred to the necessity for education in the laws of health, and recommended that direct teaching in sanitary matters should be introduced into our elementary schools; that a play-ground and a gymnasium should form part of every school building; that every girl and boy should know how to swim; that all schools should be properly ventilated; and that children in schools should be prevented from sitting in damp clothes, especially shoes. Miss Adams concluded by noticing the invaluable benefit which must accrue to society from a spread of sanitary knowledge, and by commending the Ladies' Sanitary Association to the support of all interested in the promotion of public health.

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[1] This paper is printed in full in the *Public Health* for December 1874.

A paper by Mr. JOHN PRICE, of Newcastle-upon-Tyne, was read 'On the Industrial Dwellings of Newcastle-upon-Tyne.' He said that, with the exception perhaps of Liverpool, there is no town in the United Kingdom which has suffered more from the evils of overcrowding than Newcastle-upon-Tyne, where nearly one-half of the entire population reside in tenemented property of one kind or another. From an elaborate report presented to the Town Council of Newcastle in 1867, it appeared that there were in that year nearly 10,000 families each occupying a single room only, and many thousands of persons inhabiting rooms destitute of the necessary conveniences; amongst many other melancholy features exhibited in the same report was the excessive infantile mortality; out of 3,950 deaths in the borough, no less than 1,926 were of infants or children under six years of age. The Corporation having neglected to carry out the recommendations of its own Committee to adopt the 'Labouring Classes Dwellings Act, 1866,' a number of philanthropic gentlemen, feeling convinced of the necessity of some remedy being applied, formed themselves into a limited liability company, and resolved to make an experiment, on a small scale at first, in the way of providing improved dwellings for industrial classes. This company, since known by the title of 'The Newcastle-upon-Tyne Improved Industrial Dwellings Company (Limited), included several members of the Corporation, who practically showed their sympathy with the movement they had supported in the Council and their faith in its financial success by taking shares in this company. The plans selected by the directors were those which seemed to provide the most convenience and comfort to tenants, by bringing as few as possible in contact with each other, and to preserve to some extent the privacy and advantages of self-contained houses. The block of buildings, erected on the site originally selected by the Corporation, consists of three sections or houses, four storeys in height, having separate entrances, passages, and spacious yards, in which are situate the wash-houses fitted up with suitable conveniences. The whole building comprises forty-four tenements, including two shops, and is so arranged that there are never more than three or four tenants on a landing, an advantage at once apparent to all who have had experience in tenemented property. There are on each landing water-closets for males and females respectively, water taps, sink, dust-shoot, and gas. The stairs and passages are four feet wide, well lighted and ventilated, the walls being cemented to the height of five feet to prevent injury by removal of furniture, &c.

Every dwelling contains a capacious pantry and two other useful closets. The rent charged for this accommodation varies according to the situation of the dwellings, and ranges from 2*s.* 9*d.* to 3*s.* 3*d.* for a single room, and from 3*s.* 9*d.* to 4*s.* 6*d.* for two rooms. The buildings were opened for the reception of tenants in September, 1870; the inaugural proceedings being honoured by the Mayor and the presence of a number of the members of the Social Science Congress, during the time the Congress held its meeting in Newcastle. The results, after four years' experience, have been most satisfactory; the rooms have always been fully occupied, and the great competition of applicants for any vacancy that occurs affords sufficient testimony of the high estimation in which the dwellings are held by the industrial classes; but the most congratulatory feature we have to present is the fact that, though situate in a district which has always contributed largely to the general death-rate of the town, the mortality in these buildings has been but a fraction of that of the surrounding neighbourhood. The deaths during the past four years have been only five, including one adult (from childbirth), and four children under two years of age from diseases peculiar to infancy; whilst the births, during the same period, have been forty! (exclusive of still-born cases). The financial results so far have been equally encouraging. The Company has paid its way, and 5 per cent. to the shareholders on their investments.

A paper was read by Dr. F. T. Bond, of Gloucester, 'On the Conditions of Efficient Disinfectants.' Having made a series of experiments of various disinfectants, he had arrived at the conclusion that a combination of sulphate of copper and bichromate of potassium in certain proportions possesses antiseptic powers with which those of no other generally available chemical agent can compare. In a solution containing an almost inappreciable quantity of this compound, infusorial germ life may be indefinitely arrested. But in addition to this property of coagulating albumen, which is indispensable to an efficient disinfectant—but which none of the common disinfectants as ordinarily used possess, except liquid carbolic acid, chloride of lime, and chloride of zinc—it is very desirable that such a body should also neutralise two of the commonest results of the decomposition of animal substances, viz. sulphuretted hydrogen and ammonia. By so doing it becomes not only a disinfectant, but a deodorant. It is an additional recommendation of the combination to which I have referred above, that

it effects both of these objects, and that it thus combines in itself properties which no other disinfectant possesses.

Mr. KENNETH M. MACLEOD, the Sanitary Inspector of Glasgow, read a paper 'On Eighteen Months' Practical Enforcement of the Food Adulteration Act, 1872, and the conclusions drawn therefrom.' He said: The Food Adulteration Act was adopted by the Local Authority of Glasgow in December 1872, when officers were appointed to enforce its provisions. By the arrangement carried out, 175 samples of food, drink, and drugs were purchased and submitted for analysis. 101 of these were certified adulterated and 74 pure. The adulterants were—In milk, water only; in tea, iron filings and green facing; in coffee, chicory generally. The mustard contained flour and turmeric, the pepper sand, the pickles traces of copper, and the butter, so far as had been ascertained, water and salt in excess. No deleterious ingredient was found in whisky, ale, porter, or wines. The drugs consisted of jalap, rhubarb, sarsaparilla, Peruvian bark, quinine, magnesia, colocynth, scammony, iodide of potassium, laudanum, and granular citrate of magnesia. These were all found pure, with the exception of two samples of scammony and one sample of citrate of magnesia. Fifty more samples, consisting of flour, jam, jellies, coffee, ketchup, arrowroot, oatmeal, brandy, and colouring matter for confections, were handed in by merchants and purchasers for private analysis. Of these 42 were found pure and 17 adulterated. The samples found pure were oatmeal, arrowroot, bread, and confections. The milk adulterations gave most trouble. Added water was found in quantities varying from 4 to 50 per cent. Sixty-eight of the worst cases were selected for prosecution. These included milk, tea, butter, coffee, mustard, pepper, drugs, and pickles. Convictions were obtained in fifty-five cases, and fines with costs imposed varying from 1*l.* 10*s.* to 21*l.* 10*s.* The conclusions arrived at, after dealing with the foregoing cases, were as follow:—

1. That testimony has been proffered on all sides that the operations of the Act have effected great improvement on food, &c., in the city. 2. That the operations of the Act have not been to any appreciable extent oppressive in any branch of trade, as retail dealers who suffered were compensated by the wholesale dealer, who in turn had their claims met till the payment of the penalties reached the true delinquent. 3. That power should be given to the sanitary inspectors to enter without warrant or law process any ship, store, shop, place of

business, or wherever goods are laid or stored, and take samples upon payment to the owner of the value of the articles. 4. That three samples should be taken, one for the public analyst, one to be retained by the Local Authority for production at court, and one to be sent to any analyst the vendor may wish to examine it. 5. That it be not imperative on the sanitary inspector to accompany the ordinary officers with the analysis, but to merely initial it, and, if need be, send it through the post. 6. That analysts appointed by local authorities should be confined to the analysis of adulterated food alone; that merchants, and purchasers, and medical men be invited to submit suspected goods and drugs to the public analyst for analysis at a cheap rate, to thereby aid in checking adulteration. 7. That it is unnecessary to put Local Authorities to the expense, and the analyst to the irritating annoyance of the latter giving personal evidence, and that his certificate in all cases, unless overruled by the judge, be taken as conclusive evidence of the adulteration. 8. That no evidence of the analysis of a sample other than that actually purchased by the sanitary inspector should in any case be allowed in evidence. 9. That, in the event of the vendor not sending the sample specially made up for him by the sanitary inspector at purchase for analysis to his own analyst, no second analysis be allowed, unless it be clearly proven to the satisfaction of the magistrates that the public analyst's certificate is incorrect. 10. That there should be standards established by competent authorities for the quantities of water butter and milk should naturally contain, and the quantities of water and the strength whiskies, brandies, and malt liquors should bear, and any excess of the first or adulteration of the second should be deemed adulteration. 11. That, as pickles, lemonade, soda water, and other articles may be impregnated with poisonous ingredients from the material of which the apparatus used in the process of manufacture is composed, the sanitary inspector be empowered to enter the premises of all such works, without warrant, to inspect the same, with the view of taking steps to interdict the manufacture where these dangerous materials are in use. 12. That statutory provisions for seizing unwholesome food, wherever found, be incorporated with any amendment of this Act, and that increased powers be granted to magistrates to deal with adulterations affecting the health of children and invalids, with the adulterations for example, and specially, of the article of milk.

ECONOMY AND TRADE.

SPREAD OF MANUFACTURING INDUSTRY.[1]

How can this Country best prepare itself to meet the increased Competition arising from the Spread of Manufacturing Industry in Europe and America? By JOHN MATHESON, JUN.

THE subject for investigation is, concisely, the probable or natural effect of the competition of other industries on the future of British trade.

Such an inquiry is necessarily of an extensive character, embracing what knowledge we possess of the relative extent of the movement, and the condition, present and prospective, of the industrial forces—labour, material, and system.

We must proceed on the assumption that the industry of the future will be built on cheapness in first cost; that capital will seek and find an alliance with economy of production in every vendible article of the world's consumption; that the means of enlarging the national workshop will—slowly it may be, but surely—flow in wherever they can be profitably employed.

Beginning, then, our brief survey of the situation, with a glance at the question of wages, we find these to be highest in the United States. Mr. Harris Gastrell, in the last Report of Her Majesty's Secretaries of Embassy and Legation, supplies, in a series of elaborate tables, information to the effect that the wages of persons employed in the productive industries of that country over those current in England cannot be less than one-third. Mr. David Wells, on a former occasion, estimated the excess in labour generally at 25 per cent.

From Prussia, which may be accepted as representing the German Zollverein, Lord Odo Russell reports the existence in

[1] See *Transactions*, 1873, p. 114.

that country of a scale of wages not dissimilar to that of our own factory population. The figures vary thus:—Men, 16*s.* 6*d.* to 24*s.* per week; women and young persons, 6*s.* to 9*s.* per week; children, 4*s.* 6*d.* to 7*s.* per week; oversmen, from 27*s.* to 42*s.* per week; foremen, 100*l.* to 300*l.* a year. The remark is added, that labour was difficult to procure even at these prices.

France, in the absence of similar details, must be assigned the position she occupied previous to the war, when labour had reached a level of cost not far below the English scale. As regards Belgium, Mr. Lumley shows the daily earnings of factory workers to have ranged in 1871—Men, from 1 f. 25 c. to 3 f. 50 c.; women, from 1 f. to 2 f. 50 c. The further details, however, furnished by Mr. Alexander Redgrave, Her Majesty's Inspector of Factories, in his interesting pamphlet published last year, indicate that some advance had ensued in the interval. On the whole, Belgium retains a comparatively economical labour tariff.

Wages in Switzerland are estimated, in the excellent Report provided last year by Mr. Gould, as still '40 to 50 per cent. below those actually ruling in England;' and it will be sufficient to add that the labour markets of Holland and Austria, as well as of Russia, where the statistics of industry are officially reported to be yet rough and imperfect, stand in the like economical position towards British manufactures.

But while the comparative cost of labour properly demands the accurate information which has been sought and obtained, it may be considered, for reasons which will afterwards appear, to have lost much of the gravity it once possessed. More important, I think, to the purpose in view, is a similar glance at the steady and extensive advance in the rate of wages which has for some years past been going on in all these countries. It appears, indeed, that the ratio is in most instances greater than that of the United Kingdom. The rise, broadly summarised from the sources of information I have quoted, stands as follows:—

In the United States.—Between 1861 and 1872, in textile factories generally, 25 to 30 per cent.; between 1860 and 1869, in woollen factories—women, 37 per cent.; men, 50 per cent.

In Belgium.—Between 1836 and 1872, in the productive industries generally, 105 per cent. Of this enormous increase, 100 per cent. belongs to the estimate of the Verviers Chamber of Commerce as that which had accrued up till 1869, the remaining 5 per cent. being the further rise considered by

Mr. Redgrave to have taken place between that period and 1872.

In Prussia.—Between 1862 and 1872, in dye works and large factories generally, 30 per cent. for female and 70 per cent. for male labour.

How far *France* has shared in this movement may be approximately estimated from the fact that she has shown herself possessed of sufficient vital force to revive an utterly devastated industry in the space of a few years. For the rest, the official statements prove that wages in the textile fabrics and the other spheres of industry generally had risen in Switzerland 'rapidly within the last two or three years;' in Austria, 'about 20 per cent. since 1870;' in Russia (so far as regards the district of St. Petersburg), '15 per cent. within three years.'

The accounts from the *Netherlands* do not instruct us on this subject, except so far as to suggest that that country forms an exception to the rule. At least, I find the following statement in the Report relating to one of the industrial centres:—'Many workmen have left this place for the adjacent manufacturing districts of Prussia, because the wages there are considerably higher.'

Now, the first obvious inference from these facts is, that the money-rate of wages has been tending towards assimilation over the whole range of European industry. The remark of Mr. Redgrave, that 'wages in France and Belgium have, until recently, borne no proportion to what was paid in England for the like services,' is plainly applicable to the other producing countries. We conclude, then, broadly, that the monetary question of wages is becoming of less importance, seeing that the barriers of distinction are falling before the course of events. But may we not, in the figures just quoted, perceive the cause of this levelling process? Are they not strong *à priori* evidence in each case of a healthy and expanding industry? Experience is now illustrating, on a grand scale, the theory propounded by Dr. Adam Smith—that 'it is the continual increase of trade which occasions a rise in the wages of labour.' This theory is confirmed by the fact that, in all the countries named, a growing trade has created an increased demand for labour, and so raised its value in the market.

And as with the wages of labour, so with the cost of living. On the same principle that wages rise with the demand for labour, commodities rise with the increased demand which higher wages create. The one movement is the natural consequence of the other, and both together rather indicate vitality of action than

weakness for the battle of trade. In the familiar truth, then, that the cost of living has been rising rapidly among the producing nations of Europe, as well as in America, we recognise the healthy operation of that law to which the rise in wages is due. That the advance has been general and important, no doubt can exist. The Chamber of Commerce in Verviers, for example, showed, in 1871, that 'the average prices of the necessaries of life for the last thirty years in Belgium had increased above 50 per cent.,' since when, as we are well informed, a considerable advance has ensued. Then the official report from the United States, already quoted, contains the general affirmation that since 1860 the cost of living has risen even in a greater ratio than the rate of wages.

It follows that neither a higher nor a rising rate of wages can be regarded as disabilities in the international comparison of strength; and that the field of inquiry may be safely cleared of one obstacle with which it is frequently encumbered —I mean the calculation of productive cost as affected by the comparative price of labour and expense of living. There was a time, no doubt, when these considerations were of paramount importance, but manifestly a new power has intervened, under the operation of which it is practicable, even natural, for both wages and the necessaries of life to advance simultaneously with a fall in the cost of production. That power is mechanical appliance. Mr. Redgrave justly remarks of Belgium that 'improvements in machinery have been greatly in favour of workmen in regard to the rise in wages,' and he might have cited our own country as a more remarkable example of the process.

I hope to avoid the error of depreciating what significance may be due to physical labour in this discussion. But production means movement-force; and it is impossible to resist the conclusion that labour has not only already become a small motor power in production, but is yearly becoming less. The familiar computation, that the mechanical power now employed in the prosecution of British industry nearly equals the united physical force of a third of the human race, may not be accurate; but we are sufficiently instructed on this subject by a mere contemplation of the legion of versatile forces that are ceaselessly playing around us, including engines moving with the strength of so many hundreds of horses, and hammers with that of so many thousands of men. Machinery, in short, has become the life of the industrial system. Doubtless, labour and money —both things to be paid for—are required for the creation of these Titans of the working world; yet after all the balance of

economy is enormously in their favour. Now, a striking and suggestive feature in this movement is the scope of mechanical power in the domain of production. The question as between that agency and manual labour is far from being merely one of comparative force. On the contrary, the mechanism of production has already acquired evolutions of a pre-eminently refined character. Delicacy of touch, accuracy of adjustment, intricacy of movement—many of the attributes of skilled labour—belong to it in a superior degree. To say nothing of the universally familiar arts of spinning and weaving, there is no process of washing, or dyeing, measuring, or registering, engraving, stamping, dividing, colouring, or twisting—equal in completeness and accuracy to that which mechanism supplies. The sphere of skilled labour in the working world appears to be contracting before the advance of constructive science.

Since, therefore, the true economic force resides in the application of mechanism, it follows that the future of manufacturing prosperity among the producing countries must be primarily judged of by the measure in which this power is acquired. Henceforth, the question of national idiosyncrasy—if indeed it has not sometimes been appraised too highly—is comparatively unimportant to the subject.

I should indeed be sorry to undervalue that Anglo-Saxon type of industry, the visible trophy of whose activities is the wealth and grandeur of England. Yet the fact is before us that the overwhelming power of mechanism is spreading over the whole area of civilisation, tending to equalise the outcome of toil, and so to level the productive capacities of race.

That mere manual strength is being driven from one old stronghold to another is a matter of common observation. In all the textile, as well as many other staple industries at home and abroad, women and children, called in the progress of mechanical invention to the post of guiding genius at the routine of production, are occupying the quondam places of stalwart workmen. My personal experience of this movement, as an employer of labour, is perhaps the most appropriate example of it I can offer. Under my own eye, a gradually accumulating series of appliances, belts, drums, roans, rollers, winches, and other apparatus, have, for some years past, been appropriating the heavy work of carrying, washing, rinsing, and dyeing cloth—some of the processes being thus found practicable in a connected chain of operations. Copper spokes, ranged in long rows over a water-trough, work each one its hank of yarn effectually in the fluid, with a slapping,

turning, reversing order of movements which lately demanded the care of an experienced man. A number of iron arms rolling in iron sockets, and furnished with moveable hooks, as the best known substitute for hands, wring the hanks which themselves have saturated in oil, squeezing out the liquid by means of a double-action which was recently only practicable to the human wrist;—moving, too, all the while towards a table on the opposite side, on which the hanks, each in its turn, are gently deposited, and all without even a moment's loss of time.

This may now be considered the current system of preparation in large Turkey red yarn works. It is to be observed in passing, moreover, that the constructive devices referred to have been mainly borrowed from Germany, where the production of the article referred to is said to exist on a more extensive scale than that of the United Kingdom. Certainly, however, these yarns are being poured into our great colonial markets of India and Burmah in large and increasing measure. It may be added that the improvements referred to apply in an eminent degree to the mechanism employed in our large engineering works and ship-building yards, where machinery is made to act with an amount of precision and power which human hands could not possibly accomplish. Indeed, in all the varied departments of trade, manufacturers are compelled to have recourse to such appliances, alike from the difficulty of procuring skilled labour and the necessity of economy in production.

Let us now turn to what reliable information we possess of the industrial resources of the several States. This is undoubtedly the central point of observation, because population, together with its concomitant consumption, has been advancing rapidly in the countries under review, any one of which, for aught we can tell, might be supplying its own wants in an increasing degree, although receiving an undiminished value of British products. It will be seen, as we proceed, that the increase of manufacturing in Europe cannot be estimated from the figures of export tables. In national industry, as in Nature's process, the spring fills its own cup ere it acquires the volume that seeks a place beyond.

Beginning, then, with *Belgium*, Mr. Lumley's report states that, in Verviers, the seat of the woollen industry, about 480,000 spindles and 440 carding machines were at work, that 'great mechanical improvements had been recently introduced,' and (on the authority of the Ghent Chamber of Commerce, which represents the seat of the cotton and flax trades of the country), that 'the cotton mills of Ghent, by the constant

introduction of new machinery, had kept themselves on a level with those of England.'

It seems worthy of a passing notice that, while the cotton trade has been hitherto considered one of the least prosperous branches of Belgian manufactures, it took a rapid start in 1871, when, as the tables show, about 50 per cent. more cotton was imported than the average quantity of the previous three years. The statements are added that 'in 1871, many new factories were established in Belgium;' that of the 29 cotton factories of Ghent, 'only one regularly manufactures goods for the English market,' and that 'yearly increasing quantities of cotton tissues are exported to America through England and France.' It is scarcely necessary to add that the extraordinary progress of productive power in Belgium is much more marked in the linen and woollen industries. The exports of woollen yarns, for example, rose from the value of about 20 millions of francs in 1868 to nearly 46 millions in 1871—manufacturing England, too, being the largest and most progressive customer. There are now mills containing 100,000 spindles, while in 1859 the largest number in any mill was 36,000. A detailed statement, furnished by the Ghent Chamber of Commerce within the last few years, exhibits the great improvements which have been effected in machinery, and the corresponding increase in productive power.

Although the circumstances of *France* have interfered with the collection of similar statistics of late, I find in the recently published Report of Lord Lytton to Lord Lyons, on the 'financial situation' of that country, evidence to the effect that during the first nine months of 1873, the whole import and export trade of France had considerably increased as compared with the same period in 1869, immediately before the war. The exports of cotton and woollen textures were each larger by about one-third, those of silk by about one-fifth, and those of linen by about one-half. Of cotton thread the exports had advanced four-fold.

Lord Lytton concludes with the declaration that the 'commercial condition of France,' as indicated by the facts adduced, 'must be accounted not only satisfactory, but surprisingly so.' Mr. Redgrave, in a statement issued after his return from a recent visit of inquiry to France and Belgium, furnishes incontestable proofs of the rapid change which has been going on in the relative position of both these countries towards England. He refers, at some length, to the 'increased and increasing size of factories in France and Belgium,' adding, 'a few years have made a great difference, and now the commercial

arrangements of a French and Belgian factory bear no mean comparison with our own.' And, again, 'very great pains are taken in France to ensure the quality of the goods manufactured.'

The official sources of information on this head concerning other countries may be summarised as follows:—

Prussia.—'The producing power of the Prussian spinning and weaving factories is decidedly on the increase,' and for the reason that 'machinery has been generally much improved.'

Wurtemberg.—'The cotton industry more especially has increased enormously within the last twenty years. In 1868, the number of spindles employed had advanced to 268,734 from 111,086 in 1858; and in the same period the average number of spindles per factory had doubled, and still the Reports of 1872 speak again and again of the continued rise in wages, and the corresponding necessity of introducing labour-saving machinery.' 'Such straws,' adds Mr. Eden, 'show which way the wind is blowing.'

Switzerland.—Reference is made to the 'extraordinary development of Swiss industry,' and a 'rapid increase in the production of Swiss textile fabrics.' The estimated number of spindles in Switzerland had risen from about 1½ million in 1867 to about 2¼ millions in 1872. The exports of silk manufactures, which occupy the chief place among the textile industries of Switzerland, rose from about 3½ millions of lbs. weight in 1860 to about 9 millions in 1871—being thus considerably more than doubled; and those of cotton yarns and tissues, which come next in importance, from nearly 21 millions of lbs. weight in 1860 to nearly 38 millions in 1871, or about 80 per cent. Yarns taken alone exhibit the remarkable increase of 321 per cent. During the same period a great increase occurred in the number of power-looms. 'It may be safely inferred that water furnishes about 85 per cent. of the motive power required by the Swiss manufacturer.' For this and other reasons, the 'advantage' in productive cost is 'evidently on the side of Switzerland, in spite of the greater cheapness of machinery and coal in England.' Mr. Gosling's Report concludes with the remark, as regards Switzerland in competition with England, that 'the balance seems to be greatly in her (Switzerland's) favour; and under present circumstances cannot fail to become still greater from day to day.'

Bavaria.—There are 'factories supplied with the best and newest machinery, in which only about half the number of workmen are required for the same amount of production as were necessary twenty years ago with the machinery then in use.'

Saxony.—In the weaving of textile fabrics, 'the hand-loom is gradually more and more superseded by the power-loom.' The factories are increasing in number and size. The number of spindles has increased in flax spinning to 36,000, from 13,000 in 1861; in worsted spinning to 130,000, from 104,000 in 1861; in carded yarn spinning to 330,000, from 303,000 in 1861. In one district there are now 1,200, and in another 400, power-looms engaged in the manufacture of cotton and linen goods—the production of which was prosecuted in 1861 by the hand-loom alone.

The Netherlands.—Statistical information is wanting, but the following statement is made:—'It may be safely asserted that there has been of late years a great improvement in the manufacture of textiles, and that the number of factories is decidedly on the increase.'

Russia.—'The textile industries in Russia have of late years made considerable advance.' 'Each year more machinery is used (in weaving mills), and hand labour is gradually supplanted by it.' 'Cotton and linen mills generally are on a larger scale in Russia than in England.' 'The machinery of many of the Moscow mills was altered even before the outbreak of the war in America, so as to be suitable for the working up of the short-stapled Asiatic cottons.' The cotton trade has thriven amazingly during the last twenty or thirty years. The linen industry, which is the most truly national, rose, as indicated by the exports, upwards of 200 per cent. between 1861 and 1869. And in the evidence furnished by mill-owners at the St. Petersburg Exhibition of 1870, it was expressly stated that an immense increase in the number both of silk and woollen factories had taken place since the publication of the last official statistics in 1867. 'The condition of the linen trade is especially healthy.' 'The quality of the Russian cotton cloths is, as a rule, genuine and good.' In dyeing and printing, 'the productions of the Russian manufacturer' are 'solid and good.'

Austria.—Among the articles 'more largely exported of late years, are "entire fabrics of cotton, linen, silk, &c."' 'There are many industries in which a notable development has taken place between 1867 and 1871.' The number of flax-spinning factories, which was 40, with 150,500 spindles, in 1862, now amounts to 62, with 370,790 spindles; and the export of linen wares was nearly doubled between that year and 1870. The Report concludes with this remark: 'The inference would seem to be that Austrian manufactures, generally speaking, are now able to compete with those of other nations.

Italy and *Hungary* form an exception to the rule, manufacturing progress in both these countries being on a trifling scale. The evidence taken by the late Industrial Commission in Italy only supplies the information that the total number of spindles in that country had increased to 500,000 in 1871, from 480,000 in 1862; and that the annual value of the woollen manufactures had risen from 74,280,000 fr. in 1868 to 83,000,000 fr. in 1871.

From Hungary the remark comes that 'the bent of the people is purely agricultural,' and that there is no 'immediate prospect of the establishment of factories'; the reason assigned, however, being that 'the great mineral resources of large tracts of the country are not sufficiently developed to promote such establishments.'

The United States.—The productive power of the country has been growing on a scale unequalled elsewhere. Before 1860 only the coarser kinds of woollen goods were produced; but the machinery was doubled during the war, and now every fabric in general use is woven. The market for this industry has grown to three times the measure of 1860. The element of foreign goods is now 'scarcely distinguishable,' and even with 33 per cent. higher wages to pay, the American woollen manufacturer need not fear British competition. During the decade ended in 1870, notwithstanding the intervention of one of the most destructive civil wars on record, the silk manufacture increased in value from about 6½ millions to about 12¼ millions, and the cotton from about 116 to about 178 millions of dollars. Moreover, the rapid progress here indicated suggests a much greater in ordinary circumstances, seeing that before the war, in the decade ended in 1860, the increase in this branch of manufacture was proportionately three times greater. The mills of America are built on the most substantial model, and possess the finest machinery, with improvements chiefly of American origin. Thus home-made machinery is gradually supplanting that of England, and is already 'to the advantage of the American manufacturer in the trade of cotton-spinning and weaving.' The cotton mills 'have grown to an extent capable of supplying all the needs of the home market, and ought to be able to compete in foreign markets with other nations.' In cotton and woollen mills, 'fewer hands tend the machinery than in England.' The means of extending production in the silk trade have also been immensely increased. In all productive operations 'the utmost use is made of mechanical power.' In 1870 the gross product of manufacturing industry was estimated at 900 millions sterling—an increase

of about 108 per cent. in quantity, and of about 52 per cent. in value over that of 1860.

And here let us notice the general significance of the circumstance alluded to in this Report, that notwithstanding the immense increase in the cotton manufacture of the United States of America, the exports of that article exceed only by a little the exports before the war. The like relation of production to shipments prevails, although in more limited measure, throughout the textile industries of Continental Europe. Thus, without proclaiming itself to the outside world, a great manufacturing system may arise and continue to expand from year to year. That such a system, once acquired, should cease to expand is unlikely in the highest degree; nor only this, but it confers, in increasing measure as it grows, the power of lessening productive cost. The protective policy of these countries, which imposes import duties, more or less weighty, both on textiles and the materials of their production—metals and machinery included—may or may not hitherto have usefully answered the purpose of building up the fabric of a domestic industry, but has assuredly cribbed exportation by rendering their own manufacture abnormally costly. It is to be observed, however, that such was the purpose expressly intended by the promoters of the system, and that these countries have now each its powerful free-trade party, pleading that the time has arrived for relaxing or abolishing these restrictions.

That this result will follow by degrees, no doubt, I think, need be entertained. It will, of course, give us a freer *entrée* of the other markets; but who can say, in view of the foregoing details, to what extent those may then be available to us? On the producing nations themselves it will assuredly confer fresh vitality, and a capacity in competition which they did not previously possess. More particularly will the start be given to such a country as the United States, where the natural result will be simultaneously to reduce the high abnormal cost of production, and to attract money for investment. In manufacturing Europe generally—where wages, taxation, and capital are more on a level—the impetus will, of course, be proportionably less.

Meanwhile, it is of the highest importance to notice that this movement, which must be considered natural and inevitable, has actually begun to tell. Belgium is already reaping the richer harvest which it stimulates. Germany has recently abolished her import duties on pig-iron, steam-engines, and some other primary materials of production. Thence too, within the last few months, the Consular statement

comes that 'the question of a reform in the Zollverein tariff continues to be agitated by the free-trade party.' Sir Andrew Buchanan, reporting at the same time, through Mr. Mounsey, on the general trade of Austria, sets forth the spur it had received from the extensive modifications in the tariff introduced in 1870, whereby the imports of the empire had been more than doubled between 1865 and 1872; proving that the new policy, while increasing the wealth of the country generally, had 'not been in any way detrimental to home industry and manufactures.' And, lastly, the proposition now seriously entertained of a Recipocity Treaty between the United States and Canada, to the end that the import duties on their interchanged productions may be at once reduced, preparatory to being entirely removed in three years, seems—free-trade measure as it is—the first streak of light in the dawn of that policy on the new world. It could, I believe, be shown that the free-trade movement in Germany has, in the few years of its existence, served not only to enlarge her productive power at home, but to extend the sphere of her industry abroad. German firms especially have been meeting us on the neutral ground of the far East; and to-day occupy a prominent place in the European commercial directories of China and Japan. Nor only on the neutral ground. The Bombay, Madras, Calcutta, and Singapore circulars now reveal a considerably larger business with continental Europe than that even of a few years back. Even America has been rapidly extending her intercourse with the far East. In the Consular Report just received from China, allusion is made to the rapid growth of the trade of the United States with that country, which, although only yet amounting to about one-third that of Great Britain, is represented as having made greater relative progress since 1864. American vessels are extensively employed in the enormous carrying trade of the great Chinese rivers. The Consular statement from Japan, too, tells of increasing trade facilities afforded at certain ports by large American steamers calling every week, and of the circumstance that 'imports are beginning to be forwarded direct from foreign countries.'

The latter observation is specially suggestive, as indicating that the great commercial revolution, naturally due to the Suez Canal, has struck the far ends of the earth. The inevitable effect of that connecting link of the seas, in association with the bond of telegraphy now uniting the distant communities of mankind, has already appeared in a wider diffusion of the lines of international traffic. Far distant countries can now more readily interchange their commodities in direct intercourse

with one another, and have, as we have just seen, begun to avail themselves of the privilege. Europe has no longer the same need of a great central power like the United Kingdom, as a medium for the execution of foreign orders, and will by-and-by have still less. An eminent cotton-broker informs me that it is even now a common occurrence for cotton orders sent to India and Egypt by mill-owners in Germany to be executed under condition of the article being delivered, through one of the Adriatic ports, direct at the factory in Germany.

I can scarcely leave this topic without remarking that if, in the course of this grand re-arrangement of cosmopolitan intercourse, Great Britain must lose some business she previously possessed, it does not by any means follow that she will find less to do. A movement, the tendency of which is to open wider fields of commerce to the whole Western world, in which she occupies the foremost place, ought to have no terrors for her, if only she is resolved to open her eyes to it and to adjust her resources accordingly. Meanwhile she may look, in common with other nations, for some benefit from that greater steadiness, as well as economy of traffic, which the new system must confer on all alike, by rendering foreign supplies procurable with comparative celerity, and in what measure they are required. As its influence extends, capital will go further and enterprise become safer, through the abolition of slow means of communication and the burden of expensive stocks on hand.

The frequent statement, then, that 'England possesses ready markets in her vast colonial possessions,' must be accepted with some reserve, in so far as it is intended to imply a monopoly of these markets. Nay, it would be folly to overlook the actual condition of India, as an example of what British Colonies may be capable of doing for themselves. I allude more particularly to the textile industries of Bombay and Bengal, regarding which my information, which has been derived from men engaged in these industries, is precisely to the following effect:—In *Bengal* the 'Goosery' cotton spinning-mill has now 18,750 spindles against 11,000 in 1868. Another such mill—the 'Bowreah'—with 33,370 spindles, was opened last year; and another, the 'Bengal,' with 18,750 spindles, is about ready to start. Projects for further similar erections are under discussion. The cotton mills now in operation pay dividends of 13 to 14 per cent. and 15 to 16 per cent. respectively, the shares being at 12 per cent. premium in the one case and 20 per cent. in the other. Only low counts of twist—10*s.* to

30*s.*—have hitherto been spun (good Bengal cotton being employed) but finer numbers are to be attempted. The 'Elgin Cotton-spinning and Weaving Mills' at Cawnpore complete the existing list, and the shares, which are in private hands, also stand high.

As regards the more extensive manufacture of jute, the six mills, numbering about 1,275 looms and 17,700 spindles which were at work in and around Calcutta early in 1873, have in a single year expanded to thirteen mills, with about 3,000 looms and 40,000 spindles, the new establishments being either already going or in course of erection. These mills together represent a capital of a million and a half sterling, chiefly supplied by British houses connected with Calcutta, and American speculators attracted to the trade by the extraordinary dividends (in some cases amounting to 75 per cent.) which the enterprise has latterly been yielding. The movement, although perhaps dangerously rapid, is nevertheless suggestive of a surprising growth of manufacturing industry. Much will depend on the success of the design which is entertained of supplementing the hitherto existing manufacture of gunny cloth and rice-bags, by competition with Dundee in some of the finer fabrics. It may be added that these mills are fitted with the finest machinery, and are supplied with native coal at ten rupees per ton. The wages of *employés* are about one-third those of England.

On the *Bombay* side, although coals and even wages are dearer, the cotton industry is far more largely developed, the advantage being a supply of better cotton on the spot. Early in the present year, eight cotton-spinning and weaving-mills, comprising 4,140 looms and 443,800 spindles, were at work in Bombay. The shares of all these concerns stand high, the profits being about 20 to 25 per cent. They spin for the China markets, as well as for local and Indian consumption, and manufacture T cloths as well as the commoner kinds of goods. On the whole, however, the spinning operations are more profitable than the weaving.

The following extract from a Bombay paper of July last shows the extraordinary vitality of this branch of trade:—

"'It would appear there are 489,290 spindles actually working, 75,000 being added to existing mills, and 107,800 in new mills in course of erection. In addition to these, which represent a capital of 28,785,000 rupees, there are new mills projected in Bombay and up-country (including Madras and Nagpore), with a capital of 15,025,000 rupees, or about

1,350,000*l.*' Here also an effort is being made to extend the spinning of yarns to finer numbers than hitherto.

Before quitting this branch of the subject, let us glance at the international aspect of the cotton industry, as deduced from the consumption of the material itself. The exceeding importance of such a comparison may be estimated from the statement of Messrs. Bridges and Holmes in their recent report on our textile factories—that 'of textile operatives protected by the Factory Laws, 46 per cent., or nearly one-half, are employed in the manufacture of cotton.' The source from which I derived the figures forming the basis of the following calculation is the well-known circular of Messrs. Ellison and Co., of Liverpool, for last year, commended to me as reliable authority by a cotton-broking house of high repute.

In the average period of the five years 1866–70, as compared with that of the previous five years, the proportionate advance in consumption, reckoned in thousands of bales, appears to have been as follows:—Great Britain, about 58 per cent.; France, about 40 per cent.; rest of Europe, about 63 per cent.; United States, about 112 per cent.

And again, from this point in the average period of the three years 1871–3, the figures show a loss to France of about 18 per cent. (which must be considered wonderfully small in the circumstances), and gains in the following measure:—Great Britain, about 21 per cent.; rest of Europe, about 39 per cent.; United States, about 33 per cent.

It should be observed that in Messrs. Ellison and Co.'s enumeration of the sources of supply, no reference is made to the large quantity of cotton which Russia derives from her own Asiatic possessions. 'Russia,' says Mr. Egerton in his official Report, 'is not wholly dependent on foreign supply for the raw article;' and he adds, 'These cottons brought to Moscow, and other centres of industry, return to Asia as manufactured articles, and the trade is year by year increasing.' He further provides a table to show that the imports of Central Asian cotton into Russia had increased eight-fold in the decade ended in 1867. True, the consumption of Great Britain, according to Messrs. Ellison and Co.'s figures, is still only a little short of one-half the exported supply; but they also indicate that the proportion in her favour was once much greater, and has been gradually waxing less. The freshest phase of this comparison, as given in the accounts just received from the United States regarding the disposal of the American crop during each of the last three years ended August 1874, is

still more suggestive of the accelerating ratio in Continental receipts. The exports were to—

	Bales, 1872.	Bales, 1873.	Bales, 1874.
Great Britain .	1,471,000	1,900,000	1,834,000
Continent .	494,000	745,000	955,000

thus showing that (some allowance being of course made for the increase of direct shipments) the proportionate quantity of the Continent to that of Great Britain had risen from almost precisely one-third in 1872 to more than one-half in 1874. The whole crop having amounted to about 3¾ millions of bales, it follows that the quantity consumed by the United States was similar to that taken by the European Continent.

It appears, then, that the talk, which I fear is still too common, of Britain continuing to supply the world with cotton manufactures, is, to say the least, at variance with an unprejudiced consideration of the facts. A 'Statistical Abstract' with relation to foreign countries, which has just been issued by the Lords Committee of Privy Council for Trade, supplies some welcome information on the general subject. Thence I deduce the following estimate of the advance in the whole business of other countries, as indicated by the total value of the imports and exports of merchandise between the years 1860 and 1872: —Russia, 138 per cent.; Belgium, 145 per cent.; France, 60 per cent.; Austria, 112 per cent.; United States, 64 per cent. Whereas the same column in the 'Statistical Abstract for the United Kingdom' reveals the amount of our own progress during these years to have been no more than 78 per cent.

In the building, then, of the national industrial fabric, even in its outward aspect, Russia, Belgium, and Austria have been going far ahead of us; while France and the United States, notwithstanding the intervention of desolating wars, remain not far behind. It may be interesting to notice in this connection that the figures, roughly estimated, represent the business of France as considerably more than one-half, of the United States as almost precisely one-third, of Belgium as above one-fourth, of Austria as nearly one-fourth, and of Russia as fully one-sixth that of the United Kingdom.

Finally, the railway systems of Europe, which can scarcely be considered a popular study apart from the perplexities of 'Bradshaw,' are worthy of notice in the 'Statistical Abstract,' as affording an international comparison of progress in the industrial power which they supply. Thus, a calculation from the mileages given brings out the following ratio of advance. Between 1850 and 1872—Belgium, 258 per

cent.; total Germany, 250 per cent.; Prussia alone, 386 per cent.; United Kingdom, 139 per cent. Between 1850 and 1870—France, 471 per cent.; Austria, 364 per cent. The value of this deduction can be estimated from the fact that, whereas in 1850 railways were comparatively new and sparse in these other countries, the mileages they had acquired at the later periods mentioned bore something near the following proportions to our own mileage in 1872—Belgium, fully one-eighth; Austria, nearly one-fourth; Prussia, more than one-half; France, almost exactly two-thirds; and Germany, upwards of three-fourths. Russia is represented as having risen from 644 miles in 1860 to 6,971 in 1870, being not far from one-half the present mileage of the United Kingdom, acquired in these ten years. 'Railways,' says one of the blue books formerly quoted, 'are gradually opening up the Russian Empire, and the effect on the commerce of the world will probably be most extraordinary.'

It may be added, in a word, that the Consular statements generally speak of great activity both in the formation of new and the extension of existing lines among the producing districts of the several States.

From Belgium it is announced that a project for connecting that country with Germany by rail has received the sanction of Government, and from Russia that the railways between Germany and that empire are now 'coming into play'—events which indicate the formation of mutual bonds of strength for commercial intercourse. Reference is also made to the rapid increase of shipping at the principal ports. Antwerp, for example, is now having a second line of steamers for the United States. Hamburg has one of the same only lately opened, which, when complete, will amount to eight ships, with a total burthen of 28,000 tons; another for South America, commenced only in 1871, but now comprising six ships of 8,000 tons burthen in all; a new monthly line for the East Indies, China, and Japan, *viâ* the Suez Canal, which has acquired the magnitude of seven steamers, aggregating 16,700 tons burthen; and a new fortnightly, instead of the former monthly, service to Brazil. Thus, in the language of the Report, 'the ocean-going steamers registered at this port, have considerably increased within the last two or three years, and at present form a fleet of 45 vessels, with a total burthen of 110,500 tons, representing a capital of 2,075,500*l.*'

In connection with this statement, the fact given on the combined testimony of a well-known shipbuilder here, and an intelligent German merchant, may be noticed, that Germany is

already building all her own smaller craft, and is making solid progress with the larger.

Now, the dominant feature in this rapid outline of the situation is the existence and operation throughout Europe and the United States of an active levelling or equalising process—in the wages of labour, the cost of living, and the *modus operandi* of production. Before the gradual adoption of universally applicable means, special powers and privileges are waning away. All around appear the manifestations of a rapid advance in manufacturing operations, and generally in the accumulation of industrial resources.

The wonderful rise of our own country forms the greatest example no doubt, but still only an example of the nascent industry of the world. It is evident, moreover, that, notwithstanding the *paramount extent* of our business hitherto, a greater *ratio of progress* generally, and notably in the textile fabrics, which occupy so large a place in our national industry, is marking the career of other nations. In other words, we are being overtaken to some extent in the march of production. Are we, then, in a commercial decline, and for what reason? I confess I have little sympathy with the frequent complaint that we are no longer sufficiently equipped as a manufacturing people; that some better organised measure of technical instruction for the working classes has become requisite for the industrial salvation of the country. The need of such an agency may indeed arise, but does it now exist? With every desire to recognise what pre-eminence in this respect may be found elsewhere, I can only judge that even the excellent technical institutions of the Continent, so far from manifesting a higher degree of attainment, are but the energetic means which have been established to appropriate, as speedily as possible, the practical knowledge we have long possessed. If we did not acquire that knowledge precisely by these means, it is not the less real. The 'rock ahead' of Continental training is a bugbear. We may feel quite sure that every fresh creation of engineering and mechanical skill, arise where and when it may, is ever finding a ready place in these islands;—that here the workshop is abreast of the school and technical instruction, which is elsewhere yet confined to collegiate chairs, may be found in the play of machinery.

All this being admitted, however, the fact remains that other countries, influenced in some measure, no doubt, by the example of the United Kingdom, but mainly impelled by those means and opportunities that arise in the steps of human progress, are fast gathering in those very elements of productive

power on which the fabric of our trade was built, and which were once more peculiarly our own. Moreover, it so happens that England herself chiefly provides the *material.* She is armourer-in-chief for the nations now equipping for the contest with herself and one another. For, while our exports of textile fabrics to the manufacturing States have been visibly declining, it is far otherwise with the two great products of metal and machinery. The increase of our supplies of these to France, Belgium, Germany, Holland, Italy, and the United States, as shown by the official tables for the years 1868 to 1872, has varied during that period of five years, as regards the different countries,—in machinery, from about 30 to 300 per cent., and in iron, wrought and unwrought, from about 50 to 500 per cent. The result is that iron in some form now constitutes one of the principal items of our exports to Germany and France, and by far the largest to the United States, Belgium, and Russia, notwithstanding the rapid increase in the production of both coal and iron in these countries. Not, however, that this process is of a suicidal character. The evolution of national enterprise now going on throughout the bounds of civilisation, has ample scope before it. Fresh fields for cultivation are even now looming in the mercantile perspective, and there is no visible limit to the dimmer expanse beyond. China, for example, the home of a third of the human race, which has scarcely yet begun to acquire the means of material progress; and Africa, a primeval continent, rich in Nature's wealth, what are these but extensive regions in the prospective kingdom of commerce?

The growing competition of other countries, therefore, does not, as some people seem to suppose, necessarily imply the decay of England. Moreover, who is prepared to show that the triumph of industry may not be hers for generations to come?

But we are now dealing with the question of progress from the standpoint of to-day, and undoubtedly the time has arrived when much depends on a clear knowledge of the international situation, in order that the people who entertain high aims may understand the better how to shape their course. Recurring, then, to the recent Consular and other official Reports, I submit, in a few words, a *conspectus* of their contents, relative to the condition of the foreign coal and iron industries.

United States.—The tariff alone has maintained prices of iron and steel above those of England. The development of the iron of the United States is likely to be very great. At present, large mines of iron, copper, and other valuable ores, are

receiving attention. Coal is not everywhere so dear as it lately was in England. In some districts 'it can be mined and placed in marketable form with one-third the labour employed in England for the same operation.' The machine shops of America are well equipped, organised, and managed, and in some respects excel the best in England.

Germany.—The production of pig-iron in the Zollverein rose from 12,800,000 cwts. in 1860 to 28,500,000 cwts. in 1871, and the exports from 200,000 cwts. to 9,900,000 cwts. In the same period the production of bar and rolled iron advanced from 7,400,000 to 16,000,000 cwts., and the exports from 160,000 to 2,230,000 cwts. The export of machinery amounted in 1872 to 971,209 against 271,111 cwts. in 1868. In the Rhenish Provinces there are thirteen ironworks now in operation, paying from 12 to 18 per cent. At present 32 new coal-pits are being sunk in these Provinces, and existing companies are paying from 12½ to 15 per cent. There was a greater total yield of the collieries in Germany in 1873 than formerly, the prosperity of the coal-trade in 1872 having led to new pits being sunk in different districts. The enormously high price of iron in England gave freer scope to production in Germany, and 'the consequence will be that in a short time considerably less of the English article will be imported.'

France (*North*).—Coal-mining is rapidly increasing, and but for the necessity of supplying other departments there would already be little need for importing English coal into Havre. In one department (Pas de Calais) the amount of coal raised reached nearly 3,000,000 tons in 1872 against only 600,000 tons in 1860. For some years past England has been in the habit of supplying the factories in this part of France; when, however, the strikes took place in England, the French manufacturers at once betook themselves to their own coal-pits. The increased price of English coal 'has had the effect of bringing prominently forward the question of the development of the mineral at home, and funds have been voted for the sinking of pits.' Nothing is wanted but railways from the pits to the coast. The advance in English coal has permitted some of the French collieries in the interior to compete with English coal. In the South, an unusually large quantity of iron ore was imported at Marseilles, chiefly from Spain and Algeria. It was partly smelted in Marseilles, but mostly sent up to the blast-furnaces of the Loire and other districts enumerated.

Russia.—Science and capital have been rapidly developing the industry of coal-mining between 1870 and 1874. Different parts abound with very rich seams of bituminous and other

kinds of coal, which, if extracted in lumps, would be as valuable as English coal for all purposes. Enormous supplies are within easy reach, and a sufficient number of good colliers alone is required for the creation of a large export trade. 'The demand for steam coal is daily increasing.' In some districts 'quite a mania for coal-raising' exists, although it was only in 1870 that public attention became directed to the subject. Foreign capital, which has of late years been so largely directed to the Russian railways, is now turning to the metal and mining industries.

In the absence (so far as I know) of similar recent details from *Belgium*, it may be sufficient to state that the 'Statistical Abstract' issued by the Committee of Privy Council for Trade in July last, shows that between 1860 and 1871 the export trade in iron had been more than trebled, and in machinery nearly doubled, that in coal having scarcely increased. It is a suggestive fact that Belgium and Prussia, too, have been finding a yearly increasing outlet for their iron and steel manufactures in our own country. Belgium, indeed, is gaining a cosmopolitan name for this product.

'Belgian nail rod-iron,' writes an intelligent friend of mine who is engaged in trade with China, 'which, five years ago, was practically unknown in China, and which, even three years ago, had no practical influence on prices, is now as well known in Shanghai as the ordinary Staffordshire brands.'

Finally, we eliminate from the mass of details comprised in the Report of the Coal Committee of 1873, the Official Catalogue of the late Vienna Exhibition, and other sources of information, as follows:—The production of pig-iron, although quantitatively highest in Great Britain, rose in the United States nearly three-fold between 1862 and 1871, having been nearly doubled in the short interval previous to the war. In 1871, the United States produced not far from one-third, Germany about one-fourth, France upwards of one-sixth, and Belgium about one-twelfth that of Great Britain. On the other hand, the production of coal, which rose in Great Britain fully one-fourth between 1864 and 1872, was, in the same period, doubled in the United States, the proportionate quantity then amounting to one-third that of Great Britain.

One striking feature in the coal Reports, viz. the complaints of high-priced labour in the United States, and of the want of good colliers in France and Germany, should be considered in connection with what must be regarded as the advent of coal-cutting by machinery. Mr. James S. Jeans, in an able paper read before the Cleveland Institution of Engineers in January

last, and noticed in the *Engineer*, enumerates the different inventions already in use for that purpose, and declares that this 'will become the question of questions to miners and mine-owners.' I will assume that neither the predicted exhaustion of the British coal-beds in 300 years, nor the possible discovery, at any time, of a motor power superior to steam, affects the present question.

And now, I venture to think, I have submitted a short and imperfect, but not inaccurate, statement of the case.

The only practical conclusion I can draw from it is that we have strayed from the direct line of material progress in two ways, namely, in our labour laws, and in the action of our trades unions. I have no objection, but quite the reverse, to either of these institutions in itself. But I would judge that the proper object of the first is fulfilled in providing the requisite leisure and education for the young; and of the other, in cultivating internal strength, in contradistinction to outward aggression. Labour laws, made in the interest of the young and helpless, are among the natural fruits of civilisation, and are now happily engaging the attention of all advanced Governments. Such legislation may be regarded as the crowning act of that gradual elevation in the *status* of labour which has been going on since the days of the Pyramids.

And, similarly, what are trades unions but the form in which the experiences of life have taught the working body to unite themselves for mutual encouragement and assistance? The unionist himself, so far from being an interloper in the commercial arena, is but a modern type of the guildsman of the Middle Ages.

The sole feature, then, of our labour laws or trades unions, which might cause alarm, would be the adoption of some policy that does not properly belong to them. And such, I apprehend, is that policy which—overlooking the right of adult labour to liberty of action—as well as the recurring vicissitudes of employment, restricts the working hours in British factories and workshops to ten hours on five days in the week and six hours on Saturday, to say nothing of the movement for a still further reduction. That this broad statement is practically correct will appear from the fact that the labour of women and young persons is interwoven with the very fibre of our productive system, to an extent indeed considerably beyond that of any other country in Europe. The proportion of adult men now working in English factories is reckoned to be 31 per cent., and of females 51 per cent. of the entire hands, against 50 per cent. of adult male

labour in France, and 40 per cent. male, with 35 per cent. female labour in Belgium. Thus, in British factories more especially, the work hangs on the element of female labour—a feature, indeed, which now belongs to our workshops generally under the Factory Acts. And, let us mark in passing, the tendency of female employment to grow with the expansion of machinery, both at home and abroad, with the prospect, too, of placing the foreigner more on a level with ourselves. Meanwhile, we have the fact to consider that the hours of work prescribed for women and young persons by the Factory Acts are, in a wide sense, the limits imposed on the play of our machinery. And, if we have seen aright, that the use of the same machinery under similar conditions is rapidly spreading among the competing countries, the paramount question of productive cost cannot be disassociated from the hours of labour. A few words will suffice to convey an idea of the foreign position in this respect.

France.—A Factory Act, applicable to children only, has existed since 1841. Children under eight years of age are not employed more than eight hours a day, with an interval of rest; between twelve and sixteen, not more than twelve hours, with two intervals of rest. Hours of actual work, with machinery running, are generally twelve per day.

Belgium.—No statutory limitation of labour exists, except an Imperial decree with regard to mines passed in 1813. In 1848, a Commission of Enquiry into alleged evils connected with labour submitted a Bill proposing a limitation of the hours of employment as regards women and children. The Bill, however, was opposed by the Chamber of Commerce, and employers of labour generally, on the ground that such a measure would be disastrous to the national industry. The actual working hours in factories and workshops vary from ten to thirteen per day.

Prussia.—A Factory Act was passed in 1839, and has since been twice amended, namely, in 1853 and 1869. As matters stand, children under twelve are not employed at all, while those under fourteen are not worked more than six hours a day, and must attend school. Girls from fourteen to sixteen cannot be employed more than ten hours per day. There is no official supervision for women. Hours of actual work range from ten to eleven and a half per day, taking into account a short Saturday, where that is given.

Switzerland has no general law, but in certain Cantons measures are being adopted for the protection of children in factories. Although in a few factories the working hours do

not exceed ten, they vary in general from eleven to thirteen per day, even extending to fourteen in some of the remoter localities.

Russia is without any factory law. The working hours are also very long, say from eleven to thirteen per day, with, however, a shorter period on Saturdays.

Holland has no labour law, but it is reported that children are seldom employed under nine years of age. The working hours are as low as ten, and as high as thirteen, most frequently eleven and twelve per day.

The *United States* are under no general labour law, but the hours of work in mills have been considerably reduced since 1839. At present these vary in general from sixty-six to seventy-two per week, being as low as sixty only in a few mills. New York, Maine, and other States run their factories eleven hours a day. When lately a Ten-hour Bill was proposed for Massachusetts, the manufacturers there protested that it would be disastrous to force such legislation on that State, both as regarded competition with home industries and with the productions of foreign countries having longer hours of work.

I am aware that statements have been made, both in and out of Parliament, more or less at variance with some of these details. So far as I know, however, the foregoing is the most reliable intelligence we possess, being chiefly deduced from the latest official reports.

Now, it were vain to inquire to what extent, if any, superior resources enable us thus to take it, as the phrase goes, 'comparatively easy.' It is perfectly clear that we are running a keenly-competed race, and therefore, I think, we should not be trammelled with superfluous restrictions.

Such a question as the comparative speed of the machinery in different countries is well nigh irrelevant. Not only do the accounts on the whole leave us little to build upon in that respect, but we cannot shut our eyes to that great levelling process in the method and cost of production which is welding the industrial nations together. 'More machinery!' is the cry from the factories and workshops of Europe and America, 'More machinery, and fewer men in proportion to women and children!' Nor, as we have seen, is the general advance in that mechanical knowledge and experience to which we owe so much a minor feature of the prospect. Mr. Alex. Redgrave, an excellent authority on the subject, combats what he calls the common observation that an English factory will do as much work in ten as a foreign factory in twelve hours,

by pointing out that although 'twenty or thirty years ago the production of an English factory was very greatly in advance of a foreign factory,' such is no longer the case, because 'there is not now a monopoly of the best machinery in England.'

As regards the question of outlay, his opinion, founded on careful investigation, is that, all the items of construction being taken into account, the first cost of a factory in France must be very much less than in England—a remark which, I presume, may with equal reason be applied to Belgium and Germany.

No one desires to witness a system of slavery in the routine of honest toil. No one disputes the fact, as regards labour, that human endurance has its limit, beyond which it is needless to go. But such considerations are entirely beside the question. There is no slavery and no compulsion. And it is of the very essence of freedom, social or political, that the poor, whose only wealth is their labour, should be permitted to dispose of it at will in the best market. Their material interests, if they but knew it, are indissolubly bound up with the wealth-making power of the country.

If as, *cæteris paribus*, it undoubtedly does, a comparatively short run of machinery means less produce and a smaller return for capital, it signifies with equal certainty a weaker demand for labour, and a lower scale of wages. I will just add here, as the result of my own experience during the last few years, that so far from the pseudo-protective measure afforded to adult labour by the Factory Acts being required in practice, the difficulty has been to procure a sufficient supply for the bare necessities of the day. Nay, the law is brought into contempt by the constant recurrence of its infringement, rendered necessary for the preservation of valuable property, and very often through the absence of workers who, with or without a good reason, do not arrive to the fulfilment of their engagement.

The successful British merchant works more or less according to the order of events. He knows by experience the advantage of placing himself *en rapport* with the changeful career of commerce—of being free to make hay while the sun shines, and to rest on his oars as the time to do either comes round. Such, I venture to think, is the best prescription for the future health of the whole system of British industry.

And now a word in conclusion regarding the other source of obstruction to which I have alluded. Strikes create lock-outs, and both together constitute the house which is divided against itself, and cannot stand. I wonder if statesmen, as a rule, regard with sufficient concern that a spirit of antagonism between the two great forces of production has been waxing

rife in this country, and now exists to quite an alarming extent. But certainly the record of its proceedings, as set forth in the daily press, is not less ominous of evil to the country than news of failing markets and baffled enterprise. Originating in ignorance, it can only end in disaster. To the working class especially, this contest is of a suicidal nature, for in thus putting their employers at bay they not only cut off their own primary means of support, but blight their future prospects in the act. Of course the responsibility rests with those who begin the war; for it is only reasonable that aggression should encounter resistance. What I affirm is, that the true interests of masters and men alike would be served by the abolition, on both sides, of every association having for its object the enforced regulation of wages. I firmly believe that the men who inculcate this truth are practically the true friends of the operative body. For, indeed, no industry can be assailed with impunity by combined action on the part of those engaged in it. The exigencies of the moment may render a forced bargain possible; but this is an interference with the natural value of capital and the ordinary profits of trade, the tendency of which is to cripple the business, and so to rebound in mischief on the heads of the actors themselves. The prospect, therefore, is that any temporary advance in wages thus obtained is a delusive boon to the recipients. And all this because the power to regulate wages belongs exclusively to the great economic laws —to the dominating influences of supply and demand. Nor can the employers themselves appropriate that power by any plan of united action, for the good reason that labour itself would elude their grasp in the attempt to depreciate its value. The utter folly of fomenting a war between capital and labour would appear if only the truth were realised that there is practically no strength in either apart from the other; and that their real attitude towards one another, so far from being antagonistic, is founded on the reciprocal action of laws which cannot err. The unrestrained operation of these laws can alone maintain the vicissitudes of toil (inevitable in any circumstances) at the minimum of evil, and evolve the best possible result for all concerned. Nor do those who strike and suffer with the purpose of obtaining higher wages appear to understand that they are seeking to precipitate a movement, one necessary effect of which is to make all commodities dearer to themselves. The facts which have been enumerated show how, in all the producing countries, the cost of living has been rising with the increase in wages; and it would be interesting to know precisely how much better off in purchasing power the working

classes here and elsewhere are to-day than they were ten years ago. But at least let them understand that the rise which has accrued in wages is in no way due to strikes. No combinations, indeed, on either side, can raise or depress the wages of labour otherwise than with a false appearance of success. It were ludicrous to suppose that the general advance in the pay of our own working population during the last few years was owing in any measure to the action of strikes. On the contrary, it may be well argued that these only served, so far as they went, to retard the movement—the true source and reasonable explanation of which will be found clearly illustrated in the tables of a rapidly-expanding trade.

Meanwhile, who will aver, in the face of the active progress of other countries in textile production, and the causes which contribute to it, that the eight weeks' suspension of machinery in Belfast, so far from merely involving a heavy loss to those more immediately concerned, was not of the nature of a national misfortune?

In conclusion, however, a yet clearer illustration of the argument is afforded by the actual position of the Scotch coal and iron-miners, now working at not much over one-half the amount of pay against which they rebelled a few months ago—working, too, of necessity, that short time which they so lately insisted on adopting.

The drop in their wages, rendered necessary in the circumstances, was not only an extremely heavy and rapid but an unnatural fall. Nothing could be more desirable than that the men themselves should be taught to see this. Their self-inflicted injury lay only superficially in the sacrifice of their savings and current wages during the continuance of their strikes, and more deeply in that to which they were blind, viz. the act of playing into the hands of their foreign competitors. The action and the reaction were of course conformably violent.

Nor only so, but they squandered their precious gains with the result of dealing a blow at their own permanent welfare.

I imagine they would be startled to realise the details I have enumerated, showing the impetus given by their own act to other countries competing with the work of their hands. From every quarter, as has been shown by the Reports quoted, the same tale comes of a great stimulus imparted to the production of coal and iron through the obstruction to these industries caused by the strikes in the United Kingdom.

Thus the ill-advised course pursued by the miners not only tended to contract the demand for their labour, but to open up

new sources of supply; and hence the comparatively poor rate of wages they are earning at the present moment.

This, I submit, is the lesson which those—whatever their occupation may be—who combine to clog the wheels of industry have yet to learn. That act, so far from possessing a merely local influence, vibrates across the Channel and beyond the Atlantic. *We* may dally, but the business of the world will go on. To close a workshop here is practically to open another yonder. It is beyond all question that we could not, if we would, arrest the progress of other countries in those industries by which we now live. And yet there is nothing in a review of the whole circumstances to hinder the conclusion that we are sufficiently equipped for the emergency to go forward too. Our success, however, I make bold to say, will depend in a great measure on the abandonment of such drawbacks as Labour Laws which restrict adult employment, and trade combinations which dictate the awards of industry. Let free play be given to the productive forces, and to the bargain between man and man.

On the Same. By Isaac J. Murphy.

I SUPPOSE it has not escaped the observation either of scientific economists or ordinary men of business that those periods of the expansion of our trade and industry in which they have advanced, not merely by steps, but, as a great living orator has said, by leaps and bounds, are followed by periods of partial reaction. We are at this time in the midst of a period of reaction; and, as the period of expansion which commenced in 1871 was marked by a great augmentation of the value of human labour, the present partial collapse is marked by the keenness, to a degree quite novel, of foreign competition.

I speak at present in general terms. I do not see any occasion to quote the known statistics of British trade, or of any of its chief branches, to establish the correctness of the above remarks. The advance in the price of labour is notorious; and the fact that various of our chief industries have to endure an unprecedented amount of competition, both abroad and also at home, is almost as well known. Some economists actually go so far as to hold that the increase in the cost of producing goods, owing to the enhanced cost of labour, is the cause of British goods being met and undersold in the markets of the world.

If this be so—and, while I cannot admit it in its fulness, I

cannot dispute that it is an important element to be considered —the operation of this cause may be expected to be but temporary. The cost of labour cannot for ever remain absolutely so much higher in England than in other countries, as it in many cases at present is. I look on the recent increase of wages, except in some instances wholly exceptional, as determined by causes out of human control; as almost certain to be permanent; and as what we have no right, and no cause, to lament. Wages have risen, if I am correctly informed, in the manufacturing towns of France and Germany as well as in England, though by no means in the same ratio. They may be expected to continue to advance, and the very extension of manufacturing industry will help forward the process. It is because England is the centre of the commerce and industry of the world, where the tidal wave which raises the waters has its origin, that the movement here has preceded the movement elsewhere.

I desire rather, in accordance with the terms of the question before us, to point out certain means which will enable us to retain our industrial supremacy than to assign causes for its threatened loss. And let me premise that the inroads which have been made upon that supremacy are not by any means generally serious, and are confined almost entirely to those branches of manufactures to which, from their bulk in proportion to their value, the cost of transport is an object of moment. To speak of that trade whose details I am most conversant with, and in which I am engaged—the linen trade—it is in the coarser fabrics alone that there is any competition at all; and this is not severe, and is confined to yarns. Ulster retains, unthreatened, its lead in the manufacture of fine and medium yarns and linens.

The usual way that we have of estimating a great advance in the industry of this country is by a reference to two indices. The value of our exports is an index of the state of our foreign trade. The amount of goods' traffic on our railways is an index of the state of our domestic trade. The latter index is not to be impugned; the former is sometimes deceptive. Exports do not always represent goods sold; too often they represent goods consigned for sale, and not unfrequently goods sent abroad to raise money on, being unsaleable at home owing to defects, when they ultimately disgust the foreign purchaser, and encourage a distaste for British goods. The possession of those grand financial facilities for carrying on business with all parts of the world, in which England is pre-eminent, is not an unmixed advantage. It has its temptations, which are often

abused. It was necessary once, when it took three months to receive an answer from America, to carry on business on the system of consignments. It is not necessary now, and the system is dying out. I regard its extinction as one of the means by which the manufactures of this country will maintain their position.

There is another temptation to which the makers of goods are exposed during a time of depression like the present. When a man gets only eighteen shillings now for an article which he sold freely for a pound a year ago—this fall of 10 per cent. in the price meaning perhaps a fall of 50 per cent. in the profit—meaning perhaps its entirely vanishing—he naturally tries to cheapen the cost of production. When machinery is much used, to diminish production itself will very often increase the cost of production; and the temptation is often too strong to be resisted to lower cost by reducing quality. From observation, and from reasoning on that observation, I am convinced that in no case is this sound policy. A man may for a few months carry on his trade on this not more than half-honest system, but when he is found out he is sure to lose. Now, what some manufacturers do on a small scale England is doing on a large scale. She is going in for cheapness and quantity at the expense of quality. By too great—shall I say too expensive—cheapness, she is losing (I hope only jeopardising) her commercial character. By making more goods than are wanted, and sending them abroad before they are sold, she is entering the markets of the world in competition against herself. There is no time when a manufacturer should be more particular about the quality of his goods than when they are dull of sale. The best goods have always a preference; and a very limited observation may convince any one that those have been the most successful manufacturers who have made the best goods, not those who have made the most.

There is one branch of our manufactures which is an illustration of the above. Within the last fifteen years the manufacture of jute has attained a very great magnitude, chiefly in the east of Scotland. The cost of transport of the raw material is very great, amounting on an average to nearly 4*l.* per ton, and this an article seldom worth more than 20*l.*, indeed I have known it sold at 9*l.* 10*s.* Dundee has therefore to compete at this disadvantage with Calcutta, where I understand jute manufactories are being erected. But I do not speak so much of the danger of competition, as concerning the intrinsic inferiority of the manufacture itself. Jute is a fibre which bears wet badly. Carpets which are in rags at the end

of six months, meal-sacks which are not worth mending, and hats which will not stand a heavy shower of rain, are not articles upon which it is reasonable to hope to found a permanently prosperous trade. When foreigners purchase such, their experience of them is certain to destroy their confidence in the old idea, that British goods are pre-eminent for durability and substantial service.

I must not enter, although the scope of the question before the Section would justify me, on the subject of adulteration. It is too vast. I must pass to the subject with which I commenced this article, and say a few words on the change which has been made in our position as manufacturers by the recent remarkable advance in the cost of labour.

I have advanced the view, that in any case the disadvantage to which the trade of this country is subjected by a large advance in the price of labour must be only temporary. I am prepared to go farther, and say that ultimately an advance in the price of labour is so certain to raise the quality, and therefore the intrinsic value of that labour, that the final effect of such advance is not to be expected to be prejudicial to the interests of any of our great industries. I say this as one tolerably intimately acquainted with several classes of handicraft men and mill-workers; and in my experience, now of thirty years, I can distinctly perceive a vast advance in the intelligence of the working people whom I know, and can almost estimate in money value the superiority of the labour of the present generation. Many, perhaps most, of those who hear me will at once understand, even in those kinds of work which consist merely of manual routine, how the labour of the working man who knows the reason why such and such directions are given him must be superior in kind to that of him who merely obeys orders, like a blind Chinese. And this advance in intelligence implies a corresponding advance in the amount of pay, and to a certain degree, the superadding of mental to physical wants which must be supplied. It is unnecessary for me to speak of the necessity of educating our manufacturing population. We are fast coming to that point when they themselves are quite as awake to that necessity as their employers.

But there is one painful feature, which distinguishes the last few years from all that have gone before them, in the history of the industrial career of the United Kingdom. I speak of the so-called war between capital and labour. There is a newspaper with this title. I do not read it. Its very name is repugnant to me. It is intended to imply that there is a natural hostility between labour and capital, or rather, between

those who possess capital and employ labourers, and those whose capital is in an unrealised form and those who have it to sell. Now, leaving aside the whole of the considerations which treat of the relations between masters and workmen, as being properly quite as much social as commercial, it is as absurd scientifically to speak of an opposition between labour and capital, as of an opposition between heat and mechanical force. Heat is transmitted, by means whereof we all know, into mechanical force. Labour, in its accumulated results, produces capital. But I must not theorise. The transition stage through which we have passed, or are passing, which is to adjust the price of labour in most of our manufacturing industries, is subject to its trials and difficulties; and there is no one set of circumstances which puts England to so great a disadvantage in relation to foreign countries, as the liability to strikes amongst work people. I have witnessed more than one of these. The evil in the manufacturing trade which they produce is almost incalculable. The worst mischief which they do is, that they disorganise everything. Take the case of a manufactory, producing its goods regularly, and selling them as produced from Monday morning till Saturday night. A strike for an increase of wages occurs, and the manufacturer must immediately decline his orders. They go elsewhere. No return of his people to their work can, in many cases, restore him to the trade position he occupied before. Again, men on strike have defended their action to me, by the analogy between their withdrawing their labour from the market and merchants or manufacturers who have goods to sell withdrawing them from the market. But there is no analogy. The manufacturer or merchant who holds back from selling his goods in expectation of a higher price, does not, if a maker, cease to produce, or, if a dealer, destroy his goods. The workmen who refuse to work till they obtain a higher rate of wages, actually *destroy* their labour for the time being. They continue to consume without producing. Their action can only be compared to that of the corn-factors of Marseilles, who on one occasion, to raise the price of their stores, threw the half of their stock of grain and flour into the sea.

Add to all this commercial mischief the vast amount of moral mischief which is produced by a cessation from labour. Idleness is the source of all manner of evil. When we remember the chance—nay, the certainty—of young men falling, through enforced idleness, into bad habits, of young women falling into worse, the responsibility is great indeed of those among the working classes who advocate strikes, and of those

among their employers who provoke them. More than all is the vast social and political mischief produced by setting employers against employed, and teaching them that they are antagonistic classes, and that their interests are hostile the one against the other.

Now, all this is, from political reasons, peculiar to British trade. What is the remedy?

In the first place, let me remark a characteristic of all strikes. I do not mean to refer to the tolerably well-known fact, that in a vast number of cases these strikes are got up by a parcel of inferior people, whose interest it is to have money contributed of which they are to have the handling. I refer much more to the spirit into which they are entered by the mass of the people who do strike. I have noticed, and many more must have noticed, the joyous and relieved disposition which manufacturing workers exhibit when they cease to work. During the present year, an Act of Parliament has been passed limiting the hours of labour in factories. I wish—and I speak as a mill-owner—that it had gone farther. Ten hours a day at a stretch is too much for the female human frame to *stand.* Nearly all factory work, so far as women are concerned, consists of *standing*, attending machinery. I should be glad to see these ten hours reduced to nine, and six or seven on Saturdays. I should be glad to see more—the holidays, now four in number, increased to twelve; and I believe, that if this were done by arrangement or by enactment, that the disposition to seek illegitimate modes of relaxation which occasional strikes now present, would absolutely cease.

I advocate this period of work in factories for the following reasons, which those who are acquainted with the details of factory management will be able to appreciate. Five hours, without any cessation, is too long a time for work to proceed. If the time during which labour is to be allowed is reduced to nine hours a day, beginning at eight in the morning, then there is ample time for a meal-hour—no small advantage before work begins at all. From half-past twelve to half-past one should be the dinner-hour. From half-past one to six should be the second period. Thus we have the advantage of two periods in the day instead of three; and the loss of work which always accompanies a stoppage is, in one case in the day, got rid of; as well as the use of gaslight in winter mornings.

Any modification of our manufacturing system which is intended to make us more fit to contend with foreign nations, must be based upon facts. It is a fact that our supremacy is threatened by cheaper, and *therefore* less intelligent labour.

Let us meet it, not by less intelligent, but by more intelligent labour. It will be found the cheapest in the end. And let us meet foreigners with cheap goods if we can, but certainly with those of good quality.

DISCUSSION.

Mr. George Potter (London) said he would confine his remarks to one or two very simple answers to the elaborate paper read by Mr. Matheson. For some years every one who was acquainted with social and political questions was aware that the bugbear of foreign competition had been raised at the corner of almost every street in every large town in this country, and those who were connected with working men's organisations had taken every opportunity of trying to show that the bugbear was really in name and not in fact. They had tried to show that the foreign competition theory had burst up, and that there was no real cause for alarm. The working men had no more interest in the trade going from this country than any other class in the country, and it would be madness on the part of any large bodies of men to combine together to drive the trade of the country away. It was neither possible nor desirable that Great Britain should do all the work of the world, and he wished to impress this fact on the audience. Other nations must do some of the work; we had no exclusive claim on the foreign trade of the world, and all we could expect, or had a right to expect, was that we might retain what may be considered a fair share. He would take three staple trades of the country, and, from the figures he would quote from a blue book just issued, endeavour to show that this country was doing its own share. The statistics he quoted were in reference to the iron, cotton, and coal trades. Belgium, the country held up to them as the most dangerous among our rivals in machinery, iron and steel, he would take first. In 1871 the whole export trade of Belgium, according to the published returns, in machinery, iron and steel was under 3,000,000*l*. France, another of our competitors, did not export iron, steel, or machinery, but she exported metal wares, and her export trade was under 2,000,000*l*. From the United States of America last year the whole export trade to all parts of the world in steel, iron and machinery of all sorts was less than one and a half millions sterling. Now, against all this should be placed the export of these articles from Great Britain, which in 1873 amounted to the enormous value of 27,000,500*l*. Our exports in cotton manufactures and cotton yarns amounted to upwards of 77,000,000*l*. America, the great cotton field, who sent the raw fibre to us in such quantities, and was doing her best to perfect her machinery and increase the number of her factories, she only exported made-up cotton goods to the extent of one and a half millions. He had to ask, in the face of these figures, whether we had any fear of competition in iron or cotton. In regard to coal, there was practically no competition, because it was certain that the coalfields were our own. Prof. Fawcett, who was the leader of this cry about foreign competitors, in his speech in the House of Commons on the

fifty-four hours' bill, had endeavoured to show that it was the decreased hours of work and the high price of wages that was running up this great competition in our manufactures, and the cry had been taken up by Chambers of Agriculture and other bodies in the country. With regard to trades' unions, he denied that they had the effect of driving trade from the country. It had been said that strikes had driven ship-building from the Thames. But this was not the case. The reason why ship-building was transferred to the Tyne and the Clyde was because material and wages were cheaper in these localities. The object of the trades' unions was not to manufacture a strike; not to set the employed against the employer, but to prevent wages falling below the proper rate which the workmen had a right to receive. He had no fear of rivalry with foreigners; but if any one had such a fear, he suggested that apprentices and young workmen should be technically educated, and that drawing should be taught in every elementary school. If trade was leaving the country, he thought it was to be attributed, not to trades' unions, but to the ignorance of the workmen. We were in the habit of sending workmen to the bench or the factory without their being able to read and write, much less than having a knowledge of technical education in the sciences. Foreign workmen were educated in their childhood and technically instructed in their youth. The drawing they would be taught in elementary schools. If this was done, he had no doubt England would progress not only in her export trade, but progress in raising up a new generation of workmen, always the best, technically instructed, and physically enabled to maintain the prestige of the country.

Sir James Watson (Lord Provost of Glasgow) said that after the statements made by Mr. Matheson very few would be inclined to adopt Mr. Potter's view. In Belgium, Germany, and the United States, notwithstanding their protective codes, an immense increase had taken place in the production of textile fabrics in these countries. In Bombay and China the increase in cotton manufacture was becoming something enormous, and the profits were so great that many people were induced to embark in these speculations to a very large extent. Dividends of 12, 35 and even 75 per cent. had been paid by companies in these places, and it was easy to imagine how they were likely to increase throughout India. He thought the state of India just now, so far as exports were concerned, was very serious. In consequence of the manufacture of jute there, the trade of Dundee had been almost destroyed. It was evident that very great care was required on the part of this country to produce at such low rates as would enter effectively into this foreign competition. Mr. Potter had spoken of coal and iron, but Mr. Matheson excepted these two trades; and he thought it had been sufficiently established that if other countries continued to advance in the same way as they had been doing they might come to do without us altogether. He was aware that great injury had been done to various trades in this district by the recent dispute in the coal trade, and they knew the difficulty that existed in getting coal in Glasgow. At one time the scarcity was such that great difficulty was experienced in getting the gas company supplied, and on one occasion he had been

told by a railway director the coal yards of Greenock had to be swept before enough coal could be got to bring the trains to Glasgow. He did not mean to enter on the subject of trades' unions. If men saw it was to their interest to combine, let them do so; but he thought masters and men should so regulate their affairs as not to drive the trade from the country. They all knew that the ship-building trade was driven from the Thames by a strike. ('No, no.') Certainly it was the means of destroying the ship-building trade in London. He hoped and trusted the people of this district would not follow their example.

Mr. Lloyd Jones (London) said that the merchants of England seemed to want the cheapest possible production, in the hope that they might be able to do all the labour of the world for ever. In England we had a trade such as no other nation in the world had. Our exports in 1872 amounted in value to 256,000,000*l.*, an amount never reached by any nation in the world before; and yet when a slight slackness took place, men bristled up as if our trade were being taken away from us. Did they, he asked, wish the whole trade of other countries to be struck with paralysis that we might continue to provide for them? Was it not ridiculous that the merchants of England should ask the working men to starve that they might get possession of the markets of the world? English labour, he maintained, was the cheapest in the world if they considered efficiency. The cause of the ship-building having been transferred from the Thames to the Tyne and the Clyde was that the ships were now built of iron instead of wood, and the work of course was performed where these materials would most readily be obtained. Trades' unions existed on the Clyde and Tyne as well as the Thames; and if they had driven away the trade from one locality, why did they not do so in another? He wondered what they desired. We had the largest cotton trade in the world. Belgium, Germany, and other countries had been spoken of, but their exports amounted to only 750,000*l.* a year. In France the export of cotton was *nil*, and in the United States it was only half a million. The export of machinery of all kinds from Belgium during last year was only a fraction over one million pounds sterling; and the export from France, except in metal wares, which amounted to one and a half millions, was *nil*; for the United States it was less than 1,000,000*l.*, while in England they amounted to 10,000,000*l.* Surely that ought to satisfy them, unless they meant that nobody else should do anything. According to Government returns the trade of this country has doubled within the last fifteen years. He protested against the assumption that the English working men were ruining England either in her present trade or in her future prospects. This country, he maintained, was the richest in the world, and her trade was expanding more rapidly than that of any other. To compare England in her foreign industry with foreign competitors, would be to compare the winner of the Derby with a number of donkeys. To show more strikingly how we had prospered, he added that in Glasgow for every rich man there was forty years ago there were forty now, and what would have been called riches then would be looked upon as poverty now. Along with this fact it was noticeable that the working people were as poor as ever. What, then, could a

working man do if he did not combine for the purpose of keeping up wages? If by their exertions they increased the cost of production to the manufacturers, it did not follow they destroyed the market. Supposing the goods had been produced more cheaply, they would either be giving them to the foreigner for less money; or if the same money was obtained, it would go into the pockets of the capitalist as interest on his capital. This same money if paid to the working men of the country would do far more good, as they would be better able to educate and clothe their family and distribute their wages in a wider area. Employers were now beginning to realise the effective power of the working man; and in the future the difficulties which in times past had been settled by force would be settled by arbitration.

Mr. R. A. Macfie (Edinburgh) repudiated the idea that the working men of this country were ruining its trade, and also that the employers were practically asking the working men to starve themselves in order that they might be able to cheapen production. It appeared to him that there was a difference of opinion whether certain things alleged were facts or not. It would be a judicious step to institute Chambers of Labour on the same principle as we had Chambers of Agriculture. Such an institution ought not to confine itself to the consideration of questions affecting wages alone, but to everything relating to the trade of the country. The grand fact before them was that, whether the competitions of which we had heard so much were exactly as represented, other nations were manufacturing largely, and it was our duty and the duty of all engaged in the business of this country to legislate and remove every hindrance which prevented us keeping ahead of them. He thought a Board of Trade, in the true sense of the term, ought to be established under Government auspices, in which might be associated merchants, working men, shipowners, agriculturalists, and others; all leading men who would act as a consulting council. He thought also that there should be a Minister of Commerce, having a seat in the Cabinet; but even if he was not a member of the Cabinet, such a man, as leader of a council of twenty wise men experienced in the commerce and manufactures of this country, would give an opinion which would carry so much weight that it would be impossible to neglect it. Such a body would take up questions which were at present utterly neglected. He was strongly of opinion that what the trade of this country wanted was an abandonment of conceit, as we were living too much on our old reputation. He thought this country, to defeat this fear of competition from abroad, should require that no treaty of unequal terms with any other country should be entered into. The system of binding ourselves not to impose any export duty on coal assured competitive manufacturers abroad that they might erect manufactories, and adjust their arrangements on almost as favourable terms as if they were residing in this country. Another principle which ought to be laid down was that the manufacturer should have a wide extent of markets. A manufacturer with a small demand incurred permanent charges almost as great as one with a demand ten times larger. If Great Britain is carrying on a very extensive manufacture, her charges become light. How do we make the charges light? By making the whole world our own. Another

hindrance to trade was the patent system. Patents, he said, increased the cost of machinery, and in this country gave an individual a right to charge a percentage upon its production. We were making inventions for all the world, and presenting them to mankind gratuitously except so far as we were concerned ourselves. It might be well to consider some system of rewarding inventors which would not at the same time interfere with the commerce of the country. Another point was that of patriotism. There were too many foreign names on the shops, and foreign articles exhibited. It appeared to him that the people of this country preferred to encourage foreigners more than their own countrymen. It was all very well to be cosmopolitan, but it was possible to go too far in this respect. It also seemed to him that we should have more uprightness in our commercial system, which at present was not carried on in as honourable a way as it should be. He was in favour of our connection with the colonies being maintained. We could only remain an united Empire by every part acting fairly towards the other parts.

Mr. George Howell (London) said the Lord Provost had made a great mistake in asserting that a strike was the cause of driving the ship-building from the port of London to the banks of the Clyde and other places. No greater mistake was ever asserted in this country. So far from any strike having taken place at the particular time referred to, the only dispute at all having reference to the ship-building trade at that moment was the part to be played by one of two portions of tradesmen, namely, the boiler-makers and the old shipwrights. Beyond that there was no dispute whatever, and it had no influence in driving the trade away. He was afraid that they must not come to this department to learn political economy, seeing that scarcely two of the speakers took the same view. With regard to restrictive laws, he altogether differed from Mr. Matheson, and expected to see a great advance in this direction before ten years had passed, at least with reference to those who could not protect themselves. The Lord Provost had spoken of the recent dispute in the coal trade, and the difficulty in getting coal in Glasgow. (He might add that there was still great difficulty in getting good coal at anything like a reasonable price in London.) But his Lordship had made no allusion to the proportions of the money paid to the coal miner and the increase in the price of coal. He himself had obtained statistics on this subject, from which it appeared that at the time when the price of coal had doubled the whole increase the workmen had obtained was $4\frac{1}{2}d.$ per ton, and in not a single instance did the advance on the wages of the miner exceed 1*s.* 2*d.* or 1*s.* $2\frac{1}{2}d.$ per ton. Then the Lord Provost was not probably aware that hundreds and thousands of tons of slag, which were lying as rubbish at the pit tops, had been sold first for a few shillings, and at last for 11*s.* and 12*s.*, for which the miner had never been paid one penny. With regard to the regulation of wages, Mr. Matheson must not teach political economy to working men. They knew history too well as bearing on their own condition to believe that their wages would rise more rapidly without trades' unions than with them. Mr. Matheson's paper was based upon the principle that the workmen of this country had no right to any larger share of

the produce of their labour than mere subsistence money. This was the groundwork of many similar addresses, and yet in Social Science Congresses and elsewhere they turned round and told the people that they must save for the future. One or other of these principles must be wrong. That it was false to say that strikes had driven manufactures from the country was shown by the fact that the men were always ready to accept arbitration, while the employers insisted on their right to dictate the terms they should receive. Capital and labour, he contended, must be placed on the same footing—the employers and employed must sit round the same table, and settle the terms on which the one was to work and the other was to pay. He had made inquiries as to the rise of wages in the building trade, in a great many counties in England in 1860, and found out that where there had been no trades' unions no increase in wages had taken place for a considerable number of years. He had sent the facts to Mr. John Stuart Mill, who had said they were certainly very curious, and tended to overthrow the opinion in vogue amongst a number of political economists in this country. It was only when working men had combined together that they were enabled to get anything like a fair share of the profits that accrued from their labour. It was thus they had improved their condition, and depend upon it they would go on improving it by the selfsame means. When working men were treated on a footing of equality with the employers, then, and only then, would the position of the working classes of this country be permanently established.

Mr. Peter McLagan, M.P., agreed with what Mr. Howell had said as to the effect which would be produced by masters and servants meeting together with the view of raising the condition of the *employés*. The remark, however, which had called him to his feet was that made by the previous speaker as to the price of coal. There was no doubt the employers pocketed the greater part of the profit. He was a partner in a firm that consumed large quantities of coal, and could say if anyone was a sufferer by its increase in price it was himself. He had investigated into the cause of the high price of coal, and found that it took place mainly on account of the scarcity of the article. In inquiring into the cause of this scarcity, he found that it arose in consequence of the workmen not putting out the quantity of coal they might have done. He might follow up Mr. Howell's remarks by stating that he quite agreed with him on the point that wages and capital should be considered on an equal footing. Wages should be like the discount rate of the Bank of England. When we have a great deal of money, the discount goes down, whilst, if money is scarce, up goes the discount. So it ought to be with the wages also, as they were dependent on the supply and demand. He for one did not object to working men combining for their own interest; the objection to unions that he had was, that they endeavoured to control the labour of other men and of individuals. He objected strongly to any man controlling his labour, no matter to what profession he might belong.

Mr. William Hoyle (Bury) stated that he had been informed by a gentleman who had been through all the mills in India, that the percentage in Bombay only amounted to 12 or 15, and was only

paid by two or three mills. The other seven or eight paid no dividend at all. The native Parsees had too much respect for themselves to invest in them. He maintained that if we re-arranged the laws of production and consumption, we need not fear the competition of any country in the world. We had a climate better adapted for manufacture than any other; we had coal and iron in abundance, and the island had numerous sea-ports not far from the mills where the production went on. The population was more industrious than that of any other country in the world, and we were the centre of the world's commerce. All these facilities tended to secure our position, not only for generations to come, but throughout all future time.

Mr. ALEXANDER MACDONALD, M.P., said that Mr. McLagan had stated that one of the principal causes for the rise in the price of coal was that the men had not been working. That had been to a large extent believed in by the general public. He thought it his duty to take this opportunity of denying the assertion; and stating that, so far from this being the case, it was made in utter ignorance of the facts. Prior to 1871 the wages of the miners throughout the United Kingdom were very low (not more than 3*s*. a day), and the demand for coal was so small that work could not be got during the whole five days the miner usually wrought. The result was that 39,000 miners emigrated in a single year. The political economists drove down the wages to the starvation point, and the men left; and they would do the same thing again. When good trade sprang up in 1871, 600,000 tons of iron were taken out of store in this city alone, and the coal that had been lying in heaps at the pits was taken away. The men, the producers, had been driven out of the country; and the employers, on the principles of political economy, put on shilling after shilling till the trade of the country was paralysed. The object of both employers and employed, he urged, should be to retain our labourers, who were the best in the world; and if this was done, there was no fear of trade being driven from the country. He had seen the workmen of every country in the world, and, putting them side by side with ours, except as regards technical education, ours stood far above any other; and for our workmen there was no fear. He understood that the papers which had been read had characterised unions as dangerous. The condition of the miners before they had unions was that of slaves. Mothers and daughters were all employed in the mines, and they required to be so employed for the maintenance of the household. When this matter was discussed before the House of Commons and the House of Lords, gentlemen rose in their places and said, 'If you take these women out of the mines, you will drive trade from the country, and it will perish.' We got these women driven from the mines by the aid of unions, and unions alone. By the pressure they brought to bear on Government, they got the hours of labour, which before were unlimited, restricted to 54 in the week. Every man admitted that these were proper restrictions.

Sir GEORGE CAMPBELL said this was not the question they were discussing.

Mr. MACDONALD replied that an attack had been made on unions, and he had a right to answer it. Children, he continued, were

redeemed through the union; women had been driven from the mines by the union; and truck, that all-destroying monster, had been crushed by the unions. But for the unions all these evils would still have been in existence, and he had to tell Mr. Matheson and any other gentleman who might preach, with a knowledge of the past that the only plan was for them to endeavour to reconcile the union with the condition of the country, and when that was done unionists would take as much interest as they did in our common country.

The LORD PROVOST said that, so far from wishing that the working classes should have merely subsistence wages, the desire was that they should have good wages, and be able to provide for their families.

Mr. MACDONALD said he believed the differences between parties were every day approaching more and more to the form of the words they used. He hoped yet to see the day when by means of arbitration they would see eye to eye.

Mr. MATHESON disclaimed any intention of saying anything inimical to the interests of the working classes. What he said with regard to trades' unions was mostly complimentary, but it was possible even good institutions were liable to be abused by the members.

Mr. STEPHEN MASON (Glasgow) knew from his own experience that foreign countries were entering successfully into competition with us. Within the last twenty years the importation of a class of yarns in which he dealt had increased from 20 to 90 per cent. This showed that the Germans and Belgians had made great progress in the manufacture of these articles, so much so that to a great extent they had superseded spinners of particular 'numbers' in this country. That foreigners were enabled to sell cheaper than our manufacturers, he maintained, was owing to their working longer hours and thus getting more out of the machinery. Another cause of their success was the superior intelligence of the workmen both in the elementary and technical education given to them. They were enabled to take a deeper interest in the work, and produced less waste, and thereby could turn out a better article for less price. Most people were aware that the association formed a few years ago for the promotion of a Technical College had not yet received the support it deserved. He believed that if we practised economy and gave a better education, the people of this country would be able to hold their own against any class of workmen in the world. Another point he wished to refer to was our national expenditure. Taking local and imperial taxation together, we were spending at the rate of 100,000,000*l.* per annum, and our export trade exceeded 300,000,000*l.* If we could reduce our expenditure on local and imperial taxation by 50,000,000*l.*, we could afford to sell goods 15 per cent. cheaper than we can at present. If we looked at the question from this point of view, and turned our attention to the development of the resources at our disposal, and the economising of our expenditure, trades' unions, factory and labour laws would become matters of small detail. No doubt masters and men would come to see eye to eye, and in industrial partnership we would find a true solution of all the difficulties by which we are surrounded.

LEGISLATION ON FRIENDLY SOCIETIES.[1]

What Legislation should follow upon the Report of the Commission on Friendly Societies? By CHARLES CAMERON, M.D., LL.D., M.P.

THE national importance of the question—How best to deal with friendly societies—is strikingly illustrated by a few figures given by the recent Royal Commission appointed to inquire into the subject. According to it the number of members of such societies in England and Wales alone is probably not short of 4,000,000, while the total number of persons interested in them as beneficiaries or otherwise is estimated at no less than 8,000,000.

These members are distributed over 32,000 societies, registered and unregistered, which possess funds in hand to the extent of 11,000,000*l.*, and are believed to save the ratepayers, through their intervention, at least 2,000,000*l.* a year. If to these figures could be added those for Scotland and Ireland, the importance of friendly societies to the United Kingdom would find statistical expression. It cannot, therefore, surprise us that, although their first legal recognition was in 1793, they have since then been the objects of much legislative solicitude —so much so, that no fewer than nineteen Acts of Parliament, besides various detached enactments, have been passed regarding them.

Nor was the work of legislation undertaken without due counsel and deliberation, for the subject has been examined into from time to time by four Select Committees of the House of Commons and one of the House of Lords. Up to the present, however, this labour appears to have been expended to very little purpose, for of the nineteen Acts referred to all but three have been repealed, and these three have proved of so little use that most of their provisions are habitually disregarded; that solvency is the exception and insolvency the rule even among registered societies; and that in England one-third, and in Scotland over four-fifths of the entire number of friendly societies have never cared to avail themselves of the advantages which the law holds out to registered societies.

The chief advantage securable by registration are these: registered friendly societies can hold property in the names of trustees; they can sue and be sued in representative names; they can proceed against fraudulent officers; they have a first

[1] See *Transactions*, 1874, p. 566; *Sessional Proceedings*, 1874-5, p. 139.

claim on the estates of deceased officers; they can enforce rules for the settlement of disputes among members by arbitration; they can invest funds with the Commissioners for the Reduction of the National Debt; can be dissolved on cheap and easy terms; and are to a certain extent exempt from stamp duties.

Now if we examine these advantages, we shall find that after all they do not amount to very much. The exemption from stamp duties, for instance, is not now a privilege of such importance as it was when it was originally conferred; and so doubtful is its expediency that the Commissioners suggest whether, in fairness to the joint-stock companies competing in the same field with friendly societies, it ought not to be repealed. The power to hold property in the names of trustees is more than compensated by the limitation of investments (to saving banks, the public funds, or with the Commissioners of the National Debt at 3 per cent.) and by the prohibition to invest in the shares of public companies, and in the purchase of houses or land, except to a very limited extent.

The confirmation of rules for the settlement of disputes among members by arbitration has in a large number of cases been found to be a mere snare, as the arbiters nominated, being officials connected with one society or another, work into each other's hands by deciding on the slightest pretext in favour of societies as against any troublesome member.

The most important advantages conferred by registration are the capacity to sue and be sued in representative names, and the protection conferred against defaulting officials. That these are the considerations which influence a large number of societies in registering, seems to be indicated by the circumstance that in Scotland, where the existence of a public prosecutor to a great extent protects them against fraud, and the common law affords greater facilities for legal proceedings in case of unregistered societies, the proportion of such societies is vastly larger than in England—so much so, that they embrace 84 per cent. of the number and 64 per cent. of the membership of Scottish friendly societies.

On the other hand, it must be remembered that the fact of registration implies various restrictions which are more or less irksome or unpopular. The rules must be according to law, and the Registrar holds that rules for dividing funds, for periodical feasting at the society's expense, or for a stated expenditure on liquor in lieu of rent in the case of societies meeting at public-houses, and various other matters, do not come within that category.

Any rule such as that under which a friendly society in-

vests its funds in building or funding s
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ment of disputes.

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This is to be explained partly th
ignorance which exists among the or

cieties, who do what they see others doing, without question to whether they might not do better. But it is due also to e fact that many friendly societies are got up by persons who r their own purposes wish to retain the entire power in their n hands, and who quietly discourage any appeal to law by itting a formality without which it is practically out of the ower of their members to litigate.

In many cases it can be understood how this freedom from isturbance may be considered a much more substantial advan-ge by the getter-up of a friendly society than the power to s society to sue and be sued in representative names, or to in-st its money at 3*l.* 0*s.* 10*d.* per cent. per annum with the ommissioners for the Reduction of the National Debt.

Now, when we consider that the law holds out this induce-ent to those in control of the worst class of societies not to gister, that a full third of the existing friendly societies are t registered, that among those which are, the provisions of the w, for want of machinery to enforce them, are systematically iolated, and that the great majority of friendly societies, egistered as well as unregistered, are in a more or less insol-ent condition; and when we remember further that, according Mr. Malcolm, the Assistant Secretary of the Board of Trade, e country is losing over 47,000*l.* a year by societies which posit their funds with the Commissioners for the Reduction the National Debt, while the Registrar's establishment costs other 2,400*l.*, the results of the nineteen Acts of Parliament, ich up to this point have been devoted to the subject, can dly be said to be satisfactory.

To remedy this state of things, the Royal Commissioners unanimous in recommending that the powers of the Regis-r should be enlarged, and the machinery at his disposal reased, so as to enable him to insist upon the law being ried into effect; and that the law regarding registration uld be so modified as to insure, as far as possible, the fair honest management of societies coming within its scope.

So far as the registering societies are concerned individually, Commissioners propose to accomplish this by largely widen-their powers of investment; by legalising dividing societies, vided they make sufficient provision for current obligations; ognising rules providing for the control of the central body r affiliated branches; and guarding against usurpation of control of a society by its collectors, by preventing them m voting or holding office on the Committee of Manage-nt. They propose, moreover, that the Registrars should be powered on request to arbitrate in disputes; that on the

application of a certain proportion of members the Registrar may order an inspection of accounts, and that in addition to his present power of dissolving the society, the Registrar should be empowered, should he think it desirable, to order a readjustment of its contributions and benefits. They further recommend that individual members, on behalf of societies, should, with the concurrence of the Registrar, be allowed to prosecute officers; and that precautions should be taken to prevent intentional 'lapsing,' by requiring reasonable notice to be given before any member shall be considered out of benefit.

There seems no doubt that if a few of the requirements suggested by the Commissioners were universally insisted upon —those, namely, which relate to the suppression of fraud and embezzlement—the standard of friendly societies would be very much elevated, and their utility greatly increased. But, unfortunately it appears to me, the majority of the Commissioners do not propose anything like this. They propose that these restrictions should apply to registered societies alone, and that registration should be purely voluntary.

If this proposal be carried into effect, the result will be that the additional stringency of the rules for insuring the honest conduct of registered friendly societies will add another temptation, to that which already exists, for designing and dishonest managers of societies to abstain from registration.

This consideration did not escape the attention of the Commissioners; for in a supplemental Report by four of their number, to which I shall presently refer, these gentlemen indicate a fear lest 'instead of increasing the number of societies simply obtaining by registration a legal status, the additional conditions which the Report recommends in respect of such societies—such, for instance, as compulsory periodical valuation—will rather deter them from registration than attract them to it.' Two of the Commissioners—Messrs. Bircham and Roundell—go still farther. 'I am further of opinion,' writes the former gentleman, 'that means should be taken for enlarging the remedies now open to the members of unregistered societies in case of fraud or other malpractices, either by an extension of the law relating to larceny and embezzlement or by means of enactments on the basis of section 24 of the Friendly Societies' Act of 1855. If, on the one hand, registration should be easy and attractive, there should not be, on the other hand, temptations to fraudulent and designing managers to keep out of registration, so as to escape any of the remedial provisions of the law.'

'I concur,' adds Mr. Roundell, 'in the opinion expressed

by Mr. Bircham in the first paragraph of his separate Report, on the ground that unregistered societies, when not actually illegal, ought not to be regarded as outside the pale of the law, and that power for the punishment of fraud is not so much a privilege of the society as a check to knaves.'

Mr. Bircham further suggests that the Registrar's department should be empowered to deal with all friendly societies, whether registered or unregistered, affecting to provide prospective benefits on death and sickness in consideration of present payments, 'else there will be less means of controlling those which hold themselves outside the law than those which come voluntarily within it, and less power to inquire into and interfere with (probably) the worst organisations than the best.'

Mr. Bircham adds that in his opinion no revision of the law of friendly societies can be considered exhaustive or satisfactory which omits this provision.

In this I entirely agree with him, and would go so far as to say that, adopting the views of the Commissioners as to the retention of the Registrar's office, had they, instead of abolishing the system of deposit of rules, proposed that every friendly society not availing itself of the full advantages obtainable on registration, should be compelled to deposit its rules, and on so doing to come under such of the provisions relating to registered societies as were intended for the prevention of fraud and imposition, a greater step towards friendly society reform would have been effected than will be effected by anything contained in the conjoint recommendation of the Commissioners, or anything that is likely to be effected by the Bill which has been framed upon them.

In enumerating the principal securities for honesty and good management proposed by the Commissioners to be held out as inducements to friendly societies to register, I purposely omitted to refer to the proposed actuarial branch of the Registrar's office, and the strict enforcement of the law requiring registered societies to send in annual and quinquennial Reports to the Registrar.

These Reports have hitherto been nominally required, but the machinery for enforcing the law in this respect has proved so defective that one half of the registered societies ignore it altogether, while the greater number of the remaining half send in their returns in such a defective shape as renders them of hardly any value.

All this it is now proposed to change. The returns will be sharply looked after; any neglect or falsification of them will

be punishable by a heavy penalty, and on the quinquennial returns will be based periodical valuations of the different societies, and actuarial tables of mortality and sickness applicable to the various circumstances under which friendly societies conduct their business.

These valuations will doubtless be of service to the members and intending members of the societies to which they relate; but the result of their publication will as certainly be to deter such societies as cannot afford to face them from registering at all.

When one remembers that a solvent friendly society is the exception rather than the rule, it seems doubtful whether this modification of the law may not have the effect of causing more societies to remove their names from the Register, and so place themselves without the pale of the law, than the provisions before enumerated will induce to avail themselves of registration.

The proposal to establish an Actuarial Department of the Registrar's office for the purpose of collecting and diffusing special information among persons interested in friendly societies, is one which at first sight would seem calculated to do considerable good. Experience, however, hardly justifies the expectation that the mere gratuitous promulgation of such knowledge will effect much.

At the present moment there is no lack of actuarial experience as regards both sickness and death, and, on application to the Registrar, sound specimen tables of contribution and benefit are provided, and every information afforded necessary for the starting of societies on correct principles.

But in the case of a very large number of societies this information is altogether disregarded. Nor is this surprising. A new society starts, for example, as most new ones do, as a rival to one already established in a town or district. Its usual course is to work on the tables of its rival, probably modifying them so as to offer more tempting benefits for the same premiums, or at least taking care not to offer less, however over-liberal its rival's tables may be.

The fact is that the promoters of new societies, in the vast majority of cases, cannot afford to look far ahead, while the older, larger, and more independent bodies—like the Manchester Unity of Oddfellows—can do the work for themselves quite as well as Government can do it for them.

Doubtless, in the course of ten years, an office such as that contemplated by the Commissioners will have done much to advance actuarial science, but it will have done nothing to check

the tendency that exists among friendly societies, and has always existed in spite of every endeavour made to diffuse the best available information, to compete with each other for present business by charging insufficient premiums for promised benefits, and to leave the future to take care of itself.

Four of the eight Commissioners (Sir Michael Hicks-Beach, and Messrs. Richards, Bircham, and Pattison) do not think that the machinery recommended is proposed to be turned to sufficient account. 'It has always,' they say, in a separate supplemental Report, 'it has always been the motive of friendly society legislation to secure solvency. Hitherto the means have been inadequate; but we believe that if the authorities suggested by the Report be constituted, they will have knowledge and power sufficient to secure this cardinal desideratum. At all events, we are of opinion that an opportunity of utilising a great power will be unwisely omitted if such a tribunal with such materials shall merely register applying societies without discrimination (only excluding societies formed for illegal purposes); and if its stamp of registration, and its certificate of incorporation, shall leave without earmark or distinction all societies which may have registration or incorporation, although some of them may be utterly insolvent, whilst others may have every claim to public recognition and support.'

These four-named Commissioners accordingly suggest that it should be the duty of the Registrar to examine the tables as well as the rules of societies applying for registration, and advise if need be upon them 'with a view to procure the adoption of such rates as will, apart from mismanagement or fraud, secure solvency.' As it is proposed not to make the adoption of such rates compulsory, they recommend that the registrar should grant certificates of two classes—namely, a special certificate (Class A) for societies adopting rates of contributions and benefits which, taken in connection with the rules, 'are such as to offer a reasonable prospect that the society, apart from mismanagement and fraud, will be able to meet its engagements;' and a second-class certificate of registration, simply stating that the rules embody the provisions required by law to be contained in them.

They propose that Class A certificate only should confer the privilege of incorporation, and that it should be necessary to renew this class of certificate periodically. Sir Michael Hicks-Beach and the other gentlemen who go with him think that by the adoption of this plan the value of the Class A certificate would speedily come to be understood by the public, and 'it would thus presently come to pass that all societies

would be divided in an appreciable manner into two classes only—societies presumably sound, Class A, and societies as to the soundness of which nothing could be predicated because nothing had been ascertained.'

It will be remarked that the four Commissioners do not propose to render registration compulsory, and that they would require from societies applying for even a second-class certificate deposit of the rules and names and titles of officers; the previous compliance with such regulations respecting registry as may be from time to time in force; the render of accounts and returns in the forms prescribed by the Registrar; and the presence in the rules of such provisions as may be specifically required by the amended law.

In return, they propose to grant privileges practically little more important than those at present enjoyed by societies with deposited rules.

If at present one-third of the friendly societies in the Kingdom are unregistered, and one-half of the registered societies fail to make their required returns, does it not seem very probable that if, under the system proposed by the four Commissioners, friendly societies ever became divisible into two classes—it would be into Class A, comprising the select few, and alone monopolising the services and attention of the Registrar's office, and the great mass of societies unregistered, and entirely beyond the pale of the law?

As for the second-class certificate of registration, that would be as little sought after as the advantages attainable on the deposit of rules under the existing statutes.

The Commissioners themselves point this out in the concluding chapter of their Report. If any attempt were made, they tell us, at classifying societies under the system they propose, a large number of old and respectable societies, which would certainly not at first come up to the standard required for a first-class certificate, would, rather than accept a second-class one, give up registration altogether.

Here, therefore, we find the proposal of the four Commissioners open to the obvious objection that without a supplemental enactment for the compulsory registration of every friendly society, it would but tend still further to increase the number of societies holding themselves aloof from all interference of the Registrar. And here again we find another confirmation of the truth of Mr. Bircham's remark, that no revision of the law can be considered exhaustive or satisfactory which fails to deal with unregistered as well as with registered friendly societies.

To me it seems that the most important lesson to be learned from the Report of the Royal Commissioners is, that the case of these unregistered societies should, in the first place, be provided for. The Commissioners speak of 10,000 unregistered societies, all, or nearly all, of which are acting in direct contravention of the law.

The adoption of the Companies Act, they tell us, is made compulsory on associations or partnerships of 20 persons for the purpose of carrying on any business that has for its object the acquisition of gain, either by the body itself or by the individual members. This provision, they inform us, applies to unregistered dividing societies, money clubs, loan, industrial, and provident societies—all of which ought to be registered as joint-stock companies, if they do not register as friendly societies.

Again, if, as they suppose, of these 10,000 unregistered societies two-fifths give death benefits, that will give 4,000 of them acting in direct contravention of the Life Assurance Companies Act.

'In short,' to quote the words of the Commissioners, 'the country swarms with illegal companies, which the compulsory action of the Companies Act, unsupported as it is by local machinery, entirely fails to touch.'

Why these societies should be allowed to flourish in defiance of the law without a protest from the Commissioners I confess I cannot understand.

They have pointed out that the insurance of wives and children in whom the insurer had no insurable interest, by insurance societies doing industrial business, is illegal, and that probably two-thirds of the policies of such societies would be held to be void in a court of law, and they very properly propose to amend the law relating to insurance companies in this respect.

But so far as the illegal companies, with which the country is swarming, are concerned, they neither propose to amend the law which renders them illegal, so as to permit of its being enforced, nor to compel them to legalise themselves by joining the ranks of registered friendly societies, to which they naturally belong. In these unregistered societies, under the English law at all events, it is a very difficult matter to bring swindling officials to justice, and it is practically impossible for members to protect themselves from the grossest injustice at the hands of the society, or enforce their righteous claims against it.

Surely it is much more the business of Parliament to put down

swindling and encourage providence in the poor man, who understands nothing about the law of registration, by giving common facilities for enforcing the fulfilment of contracts, than to attempt to protect societies against themselves by forbidding them to invest in the shares of unlimited companies, or to purchase more than a single acre of land.

It seems to me, therefore, that the first requisite indispensable for any successful legislation regarding friendly societies based on the Report of the Royal Commission is the compulsory registration at least of all societies doing insurance business of whatever kind.

If it be undesirable, as I believe it is, for Government to interfere with the business of such companies more than is absolutely necessary, let the requirements for registration be reduced to a minimum. The limitation of investments, the sending in of Reports and returns, the subjection to compulsory valuation, and similar provisions which may prove extremely beneficial to societies willing to submit to them, it would be, for reasons sufficiently stated by the Commissioners, very unwise to attempt to extend to societies reluctant to come within the range of the law at all. But registration of the rules and office-bearers of every society is necessary in the public interest, as well to protect societies against fraudulent officers, as individual members against societies, and should be universally insisted on.

The Registrar need not to be asked to trouble himself about the legality of the rules more than he at present does about those deposited with him, where he has simply to see that the society is not constituted for any illegal object. The law might also provide against dishonesties which have been shown to exist to such an extent as fraudulent 'lapsing,' or dishonest arbitration, by providing that no lapse should occur without due notice, and that every rule forbidding an appeal to the County or Sheriff Court should be null and void.

The Registrar might be empowered, if requested by a certain proportion of the members of any society, to step in and perform those services in the way of arbitration and adjustment of premiums and benefits which it is proposed shall fall within his province in the case of registered societies.

Let this be done, and you will at once remove the swarm of illegal companies which at present illustrate the blundering of our lawgivers, and do away with the absurd anomaly of allowing, on the one hand, the poor man—ignorant of law, and easily imposed on—to be swindled with impunity in one out of every three existing friendly societies; while, with the other, we

expend some 50,000*l.* a year, and propose to establish a costly Government office, on the ground that the working classes ought to be encouraged in habits of providence by the agency of friendly societies.

Once compel every society to register, and do away with the easy refuge for swindlers which the law relating to registered societies at present provides, and you have it in your power to grant discriminating certificates to societies complying with the proposed requirements as to returns, and coming up to a certain standard of actuarial soundness.

Without it the proposals of the entire body of Commissioners, while, doubtless, benefiting those honest and well-conducted societies which choose to submit to the conditions attached to registration, will drive out by the thousand societies which, though registered at present, have never complied with those conditions—societies which exist by means of their lapses, or which dare not face periodical valuation.

Without it the system of classification proposed in the supplementary Report—while entailing an elaborate and expensive machinery—would drive all but a few of the very best of our friendly societies to join the ranks of the myriad illegal companies which at present swarm throughout the country.

On the Same. By the Hon. LYULPH STANLEY.

FOR the prosperity of friendly societies there are two main requisites: 1. Adequate contributions in proportion to the benefits; 2. Efficient management.

The first is useless without the second; and, in the absence of the first, insolvency must inevitably overtake the great mass of societies sooner or later.

Most actuaries and persons of education who have taken an interest in friendly societies have dwelt most on the necessity of adequate contributions—naturally enough, for the settlement of tables is a matter which can be done for the societies. Efficient management must, substantially, depend on the members themselves. And of the two requisites I consider the second more important than the first. No doubt, in a society that divides its capital among the members or that charges a uniform rate irrespective of age at entrance, there is likely to be an unequal distribution of benefits in proportion to payments, and the time will come when members who have subscribed in hope of a provision for themselves will find themselves disappointed. Still the society, while it lasts, will accomplish many

good objects if it is well managed. It will have expended the mass of its money in the relief of sickness among the members, and so far have acted as a provident provision; and, if the money has been dispensed with vigilance, it will not have encouraged sham sickness and a habit of spunging upon the funds. But many a society certified by an actuary, and with excellent rules on paper, will, if badly managed, muddle away its funds by bad investment, or see itself robbed by the embezzlement of officials who will get control of the management and waste the resources in excessive salaries, and the members, unchecked, will impose upon the society; so that this apparently creditable and carefully-organised society will break up sooner than the rude village club, and with greater scandal and injury to the cause of provident association.

The necessity of watchfulness and local self-government to the success of a club precludes the advisability of the Government undertaking the business of sick insurance. There would be practically no check upon imposition if the Government were paymaster. Insurance at death the Government may undertake; though, even here, it is doubtful whether the Government can conduct the work as well as it might be done by the large affiliated orders.

The Manchester Unity of Odd Fellows, if it established a family funeral fund, to be worked through the organisation of its lodges, could cover the whole country, and supersede the lavish and fraudulent collecting societies which now transact this business. The experiment has been already tried, with reasonable success, on a smaller scale by the Rational Sick and Burial Society, Oldham Road, Manchester; and if the board of directors of the Manchester Unity would take this matter up, they would confer a great boon on the country.

When we consider the large number of unregistered societies, and the jealousy and suspicion that prevail among the more ignorant, and to some extent even among the superior artizans and mechanics, of Government interference, we must beware how we increase the stringency of the requirements for registration lest we check the tendency which exists, and is fostered by the leading men of friendly societies, to place them under the protection and discipline of the Friendly Societies' Acts.

Again, before we increase the stringency of our requirements, we should be satisfied that the societies now registered comply with the Act as it stands.

In dealing with friendly societies, we may first take the Manchester Unity of Odd Fellows and the Ancient Order of

Foresters. Both these orders should have all their branches registered, and nearly all are registered, and no doubt soon all will be so.

In the case of the Manchester Unity, a strict supervision by the order, carried out far more efficiently than any Government supervision could be, is at work; and yet there are many branches still which violate the laws of the order and disregard the provisions of the Act. Year by year a better compliance is brought about, but the leaders are obliged to use infinite tact and discretion in order to lead their members in the right way. The same remark applies to the Foresters, only that both in their system of government and in the efficiency of their branch management they are far behind the Manchester Unity.

The history of the Manchester Unity is full of large secessions on account of the imposition of restraints for the sake of soundness. If these lodges, with their sense of pride in belonging to a large order, with their share in making the laws by which they were to be bound, and in spite of the gradual and conciliating manner in which it was attempted to enforce the rules, have rebelled, how hopeless it is to suppose that the Government can enforce upon all registered societies throughout the country a still higher standard of efficiency.

The Registrar's office may, indeed, insert pattern rules in the laws of all societies; but the result will be that the printed rules will be merely for show, not for use, and that, should any attempt be made to enforce them, the societies will be dissolved or carried on as unregistered societies. And no efficient steps can be taken in these cases to enforce the law and hold societies to their registration. Any extensive attempt to do so would be odious, and would result in an agitation which would probably repeal the law.

The great principle to be borne in mind in legislating for friendly societies is, that the right of associating for any legal purpose should be admitted as fully as possible, and that all associations should be protected in the amplest manner against the frauds of those who have to do with them. Any technicalities of law that stand in the way of a partnership getting prompt justice in case of fraud against them should be abolished. The summary remedies against officers who embezzle money, or who withhold money or papers, should be in the reach of all who employ such officers. On the other hand, members of associations should have prompt and cheap justice in disputes with their society. In the affiliated orders, such as the Manchester Unity, the rules provide efficiently for the equitable settlement of disputes on appeal; and in the case of registered

societies the right of settling their own disputes according to their rules should be left to the members. This is a right which they justly value very highly, and societies which by conforming to the requirements of registration give guarantees of good management should retain this right. But the unregistered societies are, as a rule, the worse managed, and the isolated clubs, which cannot provide an appeal to a body outside the members and independent of them. For them, therefore, the law should provide that disputes should be settled either by the County Court judge or Registrar, or by the magistrates in petty sessions, or by some arbitrator appointed by some one of these authorities.

Again, whatever investments of funds be desirable—and it is desirable that the Act should recommend certain safe investments—it should be legal for friendly societies to hold property of all kinds, though it might be a breach of trust in the trustees to suffer the funds to remain invested in certain ways—as, for instance, in loan on personal security. But friendly societies ought to be able to make a good title to land, although land is probably not a good investment for them.

The possibility is that in a few years, twenty or thirty at most, the affiliated orders will occupy nearly all the ground which various permanent societies now hold. This form of society is clearly the one most generally popular and which has most hope of future improvement. The law therefore should favour them, and use their machinery for the improvement of friendly societies. The principal thing wanted is the strengthening of the tie between the branches, and the enforcing of the general laws upon all the order, without permitting secession as hitherto. The general body should have power to enforce whatever laws it may make by fines upon disobedient branches. This strengthening of the bonds of the executive would cause reforms to be carried more rapidly, and to be enforced more thoroughly.

Many persons are strongly in favour of developing the Government system of deferred annuities as a provision for old age. It is generally agreed that the contributions necessary to purchase such an annuity are beyond the reach or the will of the labouring classes. Indeed, a mechanic in a large town can do far better with his money than buy a deferred annuity. The same money put in a building society or co-operative society, will roll up at 5 per cent.; in a loan or funding society it will produce 6 or 7 per cent.; and should the owner die young the money is there with the interest for his friends. The annuity is only calculated at 3 per cent., and if the investor

dies before the time for receiving it he gets nothing. The agricultural labourer, if he is able to save the money for an annuity, will do better in those parts of the country where he can rent a bit of land, if he saves, and buys a cow.

Though not in favour of minute legislation, I think that some additional requirements might be made of registered societies, and some of the existing requirements more strictly enforced. Every friendly society numbering more than thirty members, should be required to print an annual report and balance sheet. The best form of those generally used at present is that of the Manchester Unity; but the Registrar should have power to settle the form, which might vary according to the character of the society. It certainly should include the number of lapses during the year. Again, without over-extending the staff of the Registrar's office, he should have three or four travelling inspectors, who should examine the returns sent up, and where they saw anything wrong, or suspicious, or where no report had been sent, they should call on the officials of the defaulting society and go into the matter with them, and hear their explanations. Where matters were going wrong from ignorance, which would be the case in nine cases out of ten, they would give a helping hand by way of advice and explanation, and generally their words would be listened to. Where they found a wilful and persistent violation of the law, they might summon the officers before the local authorities, and obtain an order for the performance of the duty which was neglected, and if necessary a fine. These travelling inspectors should be men practically conversant with the working of friendly societies, such as the district secretaries of the larger districts of the great orders, members of the board of directors of the Manchester Unity, and similar men. These men would bring a special fund of knowledge and of training, which when backed by the authority of a Government appointment, would make them most powerful reformers of friendly society organisation. If the travelling inspectors were chosen from this class, they would not need high salaries; 300*l.* a year each and moderate travelling expenses would secure the services of good men.

One of the most important things for the success of a friendly society is to have a sufficient number of members. Mr. Hardwicke thinks that no lodge should be less than one thousand in number to equalise the risk from an actuarial point of view. The system of district levy in case a lodge breaks down, will meet the failure of any smaller lodge; but there are other reasons besides those of an actuary for desiring

large lodges, if possible, of from two to three hundred members. The present average of the Manchester Unity is about 120. The larger the lodge the more easy to find an efficient man to act as secretary, and the less the percentage of management expenditure. Again, the greater the probability of finding private members who will act and attend lodge meetings, and take a part in lodge business, and the larger the income, the better the opportunity of putting out the surplus funds at good interest instead of their lying idle in the bank at 2½ or 3 per cent. In order to gain these advantages, there should be the greatest facilities given for the amalgamation of branches. It has often proved that where two separate small branches were languishing, on being united they have thriven. The only order which has done much to consolidate districts is the Order of Druids. Though provision is made in the rules of the Manchester Unity for the consolidation of districts with one common fund, I am not aware of a single instance where this rule has been put in force. In order to facilitate this consolidation, there should be more power to recognise government by delegates. The existing law contemplates all rules being made by a mass meeting of members; but for many purposes a meeting of representatives is far more convenient and effective. In all legislation for friendly societies, it must be borne in mind that the collecting societies, which work over a large extent of country, say over an area with a radius from their head-quarters of more than five miles, are not friendly societies in the popular sense, and require totally different legislation to protect the interest of the insurers, who cannot exercise any effectual control over the office management. The local collecting societies, principally in East Lancashire come between these office clubs, as they have been called, and ordinary friendly societies. It would be impossible to put into an Act of Parliament all the varying provisions needful for varying societies, and there should be some discretion allowed to the Registrar of Friendly Societies to frame or allow rules for the carrying out of the objects of the various societies, subject to an appeal to the Secretary of State, or to the President of the Local Government Board.

It may be thought by some that the law should define more clearly the duty of guardians to members of friendly societies, as to their right to relief.

It has been suggested that the guardians should discriminate between members of well-managed societies and those which are ill-managed in giving relief. This is not practicable. In the first place, a labouring man often has no choice; he must

join the local club or none. Again, he has not the knowledge to enable him to find out what society is truly well-managed. He joins a club from the recommendation of his comrades. There is a common practice of guardians to allow a pauper half his club money in giving relief. This practice, no doubt, may encourage that form of providence; but there is no reason in principle why a man who has put by ten or twenty pounds in his club should be credited with half, whereas, had he put by ten or twenty pounds in the bank or in a co-operative society, he would be required to draw it all out before he could call on the ratepayers to support him.

On the whole friendly societies are improving, and we must depend more upon the growing experience of the members than upon Government interference to secure good management. Many existing societies are hopelessly insolvent, and must break up sooner or later. But many more which an actuary would pronounce insolvent, will pull through; and though, no doubt, the young will to some slight extent pay the benefits which the old should have provided for, yet no substantial injustice will be done, and the existing machinery of provident efforts will be kept in working order for the coming generation. On the whole, the principal good that can be done by the Registrar's office and the law, is to provide the greatest security against fraud, and the cheapest and promptest mode of self-government and settlement of disputes; and, in the second place, by publicity and exacting returns, to keep up a certain amount of criticism, and to help the education of the members in the requirements of financial soundness. I do not think friendly societies can be coerced into good management by threats or by compulsion. But I think a great influence might be exercised by the offer of certain prizes to deserving societies, and I would therefore append to this paper a suggestion for the application of charitable endowments to the improvement of friendly societies, which I drew up when employed on the late Commission.

On the different modes of State Aid to Private Undertakings, and in particular to Friendly and other Societies. By J. M. LUDLOW, Secretary to the late Friendly Societies' Commission.

THERE is no more difficult question in social economy than that of the extent and nature of the help which may be given by the State to private undertakings, especially to associated bodies. I cannot attempt here to treat the question

exhaustively; I can only endeavour to do so in a suggestive manner.

The principal forms of possible State help are the following:—

1. Advice, whether in special cases or generally.
2. Legal security.
3. Special remedies against wrong-doing.
4. Special remedies in disputes.
5. Aid in management.
6. Privileges against individuals.
7. Fiscal exemptions.
8. Direct pecuniary aid.

1. Of the first form, under the shape of special advice, an express instance is afforded under the Friendly Societies' Act by the provision (18 & 19 Vict. c. 63, s. 26) which directs the Registrar to advise with the secretary or other officer of a society, if required, for the purpose of ascertaining whether the rules are calculated to carry into effect the intentions and object of the persons who desire to form the society; an obligation, it may be observed, which does not extend even to the amendment of rules, or to any other proceeding of a society. The objection to this is, that the adviser cannot be infallible, and that if he advises wrong, a moral responsibility attaches both to him and to the Government of which he is an officer. The objection is a weighty one, and cannot of course be entirely obviated; but it may be so for all practical purposes, 1st. If the advising officer be judiciously selected; 2nd. If his advice be strictly confined to matters of practice and law with which he is officially conversant.

Under the head of general advice may be reckoned the publication (without the enforcement) of tables of sickness and mortality, model rules and forms of all sorts, suggestions and opinions such as those often published in the reports of the late Mr. Tidd Pratt. A serious amount of moral responsibility may attach even in such cases. The only tables hitherto published by the Government for friendly societies, and which were for many years supplied to them by it, those of Mr. Finlaison, are stated to be misleading on many points, and are calculated at a slightly higher rate of interest than that now allowed on deposits by the Government; so that a society adopting the tables framed by the Actuary to the National Debt Commissioners, and investing all its money with the Commissioners, would (though very gradually) go to the dogs through that cause alone. But it seems to me that the responsibility of the Government lies not so much here in the original

publication of tables, which it may have had reason to consider the best at the time of publication—and which even now are avowedly safer than the rates adopted by the great bulk of societies outside of the Manchester Unity—as in the omitting to correct them since by the ampler experience and science of the day. A Government cannot be infallible any more than the human beings of whom it is composed. What may be fairly claimed of it is that whatever general advice it gives should be the best practicable for the time being. Its duty is not to be always in the right, but to correct its practice whenever found to be wrong. It appears to me that general advice, subject to correction when necessary, is the best of all forms in which Government aid can be given.

2. Under the head of legal security I would reckon all enactments making the signatures of particular officers, or documents emanating from particular offices, evidence without further proof. This is also a very valuable form of help, if not too freely given; but where it is carried too far, it may open the door to forgery and fraud. It may be safe, for instance, to say that the signature of any police magistrate should be taken without further proof; it would not be safe to take in like manner that of any police constable.

A more important class of instances under this head are those which make certain official proceedings not only evidence without proof, but conclusive of their own validity. The certificate of registration of the Registrar of Joint-stock Companies is conclusive evidence that all requisitions of the Companies' Act in respect of registration have been complied with (25 & 26 Vict. c. 89, s. 18). The certificate of registration of the Registrar of Friendly Societies is, as respects industrial and provident societies, 'in all cases conclusive evidence that the society has been duly registered' (30 & 31 Vict. c. 117, s. 4). His certificate under the Friendly Societies' Act goes further, and certifies that the rules 'are in conformity with law.' But there has been much litigation with respect to its effects, and it has been distinctly held by high authority (see for instance *Laing* v. *Reed*, 5 Ch. App. Ca. 5, though decided on a different statute) that it is not conclusive of the legality of the rules. I must say—although I believe the opinion is not generally shared by my legal brethren—that it appears to me only fair to the public that if an officer is appointed to administer a public Act, he should, under proper safeguards, have authority to state that rules founded upon that Act are legal, and that his certificate to that effect should be conclusive as respects the particular matter. And I believe that, as respects associations

formed among the poorer class, who are almost of necessity shut out from access to really good legal advice, no greater boon can be conferred than the enabling them to obtain from a qualified public officer authoritative legal security for the validity of their rules. Into the safeguards which should be attached to such an authority I need not here enter. No doubt, as in all cases under this head, there will be a moral responsibility for the Government. In the long run the officer trusted with the authority to declare rules legal is sure to make some mistakes; and if he declared some legal which are not so, there will be no remedy in the particular case, *i.e.* acts otherwise contrary to law will be covered by his certificate. But supposing that adequate care is exercised in selecting him, and that he acts under the responsibility of possible dismissal from office, I do not think the occasional occurrence of such cases would anything like balance the enormous boon which would be conferred upon societies by giving absolute legal security to their rules when duly sanctioned.

3. Special remedies against wrong-doing. This has been a very favourite mode of conferring boons upon bodies which were considered worthy of State approval. Sometimes it takes the shape of simple cheapening of prosecutions by summary procedure, sometimes of granting the right to prosecute for acts not otherwise punishable. When, indeed, it takes that of prosecution by a State officer, it appears to me rather to fall under the head of aid in management. So far as any offences are really special to any class of bodies, there is nothing objectionable in special penalties. But beyond this, I must say my feeling is strong against affording aid in this shape. Justice is justice, and should be equal for all. If summary procedure is an advantage, all persons should have it in the like cases. If a wrong is a wrong, all persons who suffer from it should be entitled to a remedy. When, therefore, the Friendly Societies' Act—and a similar provision exists in several others—provides that where any member or other person, by false representation or imposition, obtains possession of any of the effects of the particular kind of partnership provided for by the Act, or having the same in his possession withholds or misapplies the same, or wilfully applies the same to purposes other than those of the rules, he shall on summary conviction be liable to a fine not exceeding 20*l.*, or three months' imprisonment in default of payment, with or without hard labour, whilst in the case of any partnership other than those provided for by this or other particular statutes, no remedy exists against a member unless the act amounts to larceny or embezzlement under

Russell Gurney's Act, it appears to me that the right conferred on these particular bodies is virtually a wrong done to all others, a licensing of fraud against them.

4. Special remedies in disputes. This form of aid is less objectionable than the other; but except when it takes the form of giving validity to some mode of settlement originating within the society itself, it may be open to exception on similar grounds. Any dispute which can be and ought to be determined by a public tribunal should be so determined, whatever be its origin.

5. Aid in management. This may be divided under two sub-heads: legislative, and official.

Every time that by enactment something is ordered by law to be done by one or more persons, which it is presumed to be for his or their benefit to do, there is legislative aid given or attempted to be given for the management of such persons' affairs. As a very simple instance of this I may quote the provision of the Companies' Amendment Act, 1867 (s. 39), that every company shall hold a general meeting within four months after registration.

There are those upon whom the idea of any such interference, as it is termed, acts as a red rag upon a bull. For myself, who have never belonged to the mere *laissez faire* school, the question seems only one of expediency and degree. If, as I believe, the laws of a country represent practically the rules by which the nation does its business, I can conceive of no limits but those of public utility and common consent of the parties interested to legislative interference of this description. Supposing, for instance, that by statistical data it were found that all frauds upon banks were committed by clerks with crockery-blue eyes, and that the great majority of bankers were in favour of a legislative enactment against the employment as bankers' clerks of persons with such eyes, I should see no objection to the passing of such an enactment. It might be very hard upon a few virtuous youths with eyes of the proscribed colour, and probably it would be advisable to have some proviso allowing their employment under special safeguards. But I must say distinctly that I see no objection to embodying a general practice, founded on some grounds of expediency, in a law, subject to any necessary qualifications. And I go further and say that where practice varies, but a limit is expedient, the law may fix that limit, and so become the foundation of a general practice. This is the justification for the four months' limit for the first meeting fixed by the Companies' Amendment Act, 1867. Experience shows that the first meet-

ing should not be too long delayed; some limit is necessary; the law fixes it at four months. I have never heard any reasonable complaint of this, and therefore I deem this instance of legislative interference in, or as I shall call it, aid towards the management of companies an expedient one.

But there are more doubtful cases than this. One of the most doubtful for me—though I believe I am in a minority amongst those who have considered the subject—is that of a legislative limitation of investments, whether of individuals or associated bodies. As a lawyer, I am of course familiar with the arguments for confining trust investments to safe securities; and yet I believe it is quite a toss-up whether the legal rules on the subject have done more harm or more good, even as respects individuals. But let us examine their effect as respects Friendly Societies.

The Friendly Societies' Act of 1855 expressly allows those societies to invest in Savings Banks, in the public funds, and with the National Debt Commissioners, and expressly forbids them to invest in the purchase of house or land (except to the extent of an acre, for the purpose of holding their meetings or transacting their business), or in the purchase of shares in companies, or on personal security, except to a limited extent on a member's life-assurance. The highest authorities consider that it is expedient to aid such societies by directing or limiting their investments. Now it appears to me that all the objections which apply to State advice, on the score of moral responsibility, apply in a manifold degree to such a course of proceeding. If a society, by following the direction of the law, or by simply avoiding its prohibitions, should come to grief, it appears to me that it has a strict right to turn round upon the State and say —You expressly allowed us to invest in this manner,—or, You allowed us by implication to invest in this manner, since you forbad other modes of investment and did not forbid this, and we are ruined; we claim compensation at your hands. Now it is easy to show that amongst the expressly allowed investments there is one that is utterly unsafe for a society, and that amongst those which are not expressly forbidden there are whole classes which may be utterly rotten. Post Office Savings Banks, for instance, are a perfect ruin-trap to any well-conducted friendly society. All the leading tables are calculated on the footing of a return of from 3 to 3¼ per cent. on investments. The Post Office gives 2*l.* 10*s.* Therefore, any society which having adopted those tables invests any of its money in a P. O. Savings Bank is so far falsifying its tables at the rate of from 10*s.* to 15*s.* per cent. on the income of its in

vestments. Again, as is pointed out in the report of the Royal Commissioners, whilst the purchase of land or shares is forbidden, nothing is said about advances on the security of either; so that a friendly society cannot buy the best freehold property out and out for the sum which it might legally lay out on a third or fourth mortgage of the same property; cannot buy the best English railway shares, but may lay out any money on the mortgage bonds of any rotten American gold or silver mine. Even if such investments were restricted to Consols, I believe the restriction would in many cases do more harm than good. The power to resort to a higher rate of interest may be the salvation of a society. Take the instance of a society, flourishing in point of numbers, which discovers a flaw in its tables. It may correct them as respects all future contracts; but how is it to deal with the existing ones, if the old members refuse to pay more or receive less? If, as is the only honest course of conduct, the assurance fund of the new contracts is kept distinct from that of the old, the only escape from ruin as respects the latter may lie in a greatly enhanced rate of interest for a comparatively short period, and I can conceive of Erie bonds bringing safety where Consols would bring hopeless insolvency. Is the State to enforce insolvency in such cases by enforcing investment in Consols?

I might carry these instances to any length, but I am anxious to pass to the second sub-head, that of official aid in management.

One of the most modest forms in which this is given is that of empowering a public officer to prosecute wrongs arising from private contracts among individuals. Throughout the Continent, and in the Northern half of Great Britain, this is made in principle a regular element in the penal law through the institution of public prosecutors, and probably the day is not far distant when England will cease to be an exception to the general practice; but the limits within which the practice extends may vary. In the meanwhile our own law admits the principle in special cases. The Registrar of Friendly Societies, for instance, is empowered to prosecute in all cases provided for by s. 24 of the principal Act, *i.e.* where members or other persons, by false representation or imposition, obtain possession of the effects of a society, or having such in their possession withhold or misapply the same, or wilfully apply the same to purposes other than those of the rules. The justification of such enactments may lie in the cost of private prosecutions, or in the circumstances of the persons likely to be aggrieved, their inability to help themselves, &c.

The inspection of the affairs of companies, on the application of a given proportion of their members, by nominees of the Board of Trade, affords another and more prominent instance of official interference with management. Here it is assumed that a public body may be unable to get at the true state of its own affairs without the aid of the Government. Official audits and valuations would rest upon the same footing.

The appointment of official directors, of which the practice of Indian railways and banks affords instances, goes much further still in the way of official aid in management.

But I think the most striking case of all is that of Savings Banks, and of the Government assurance and annuity system.

Beginning with associated bodies, the State said to the Savings Banks and to the friendly societies, Hand over your money to my National Debt Commissioners, and I will so far manage your finances for you. I will be responsible for the money, and will give you upon it such interest as I think fit, but I will fix the conditions of paying in and paying out. What it said at first to associated bodies it has since said, through its Post Office Savings Banks, within certain limits to individuals; and it has moreover undertaken to manage for both societies and individuals, also within certain limits, the business of life insurance and of annuities. We are here on the verge of the question which lies beyond that of State aid to private undertakings—that of the State taking up certain undertakings itself. I shall not pursue it further than to say that whilst there are, of course, many weighty arguments against State management in any business whatsoever, whilst I am as jealous as anyone of State interference with healthy voluntary action, and am convinced the time is not come—if it ever does—when, for instance, any Government insurance against sickness could be safely carried on, yet the argument against all State management, rightly viewed, appears to me one of expediency only, and not of principle. If it be for the advantage of the community at large that any particular business be carried on by the State, as the representative of the community at large, rather than by individuals, I can see no reason why it should not be so carried on.

I may, perhaps, observe that I do not reckon as a form of official aid in management that which may be the most efficient help of all to certain bodies, viz., any official mark of superiority given to one body over another, either in the shape of a discriminating initial certificate, or as the result of subsequent inspection or examination. This is a mode of interference which may be of the greatest importance, but it has to be justified

on a different ground from that of help to the individual body, forming part as it does of an altogether different subject, from which I have sought in this paper to steer clear, that of the regulation of or interference with private undertakings for the safety of the public.

I come to a much more objectionable mode of aid, in my opinion, that of

6. Privileges against individuals. These form really only extreme instances of the description of aid afforded by special remedies against wrong-doing, since every such special remedy is virtually a privilege against somebody, the only difference being that in the one case a right is given which would not otherwise exist, whereas in the other a distinct preference is given to one right over another. I may quote as an instance under this head the priority still given to friendly societies over other creditors against the estates of their deceased officers, and the like priority formerly given to them against the estates of such officers when bankrupt, which, indeed, the societies claim to have restored. This appears to me entirely indefensible. It cannot be more criminal to embezzle the money of several persons than of one. If the purposes for which the money is collected have to be taken into account, the remedy of any single rich person, widow or orphan against a dishonest trustee should be just the same as that of any sick fund or widows' and orphans' fund.

7. Fiscal exemptions. This is also a form of aid which has been very largely used hitherto. In the days of exorbitant stamp duties, no boon could be readier and more practical in effect than an exemption from such duties. At present, it is the fashion to run down all such exemptions. No doubt it is true to say that any one man's exemption *primâ facie* raises the burthen upon another; if money is wanted, and one man does not pay, another must; just as, if one man lives idle, some other man must do double work. But the question is not, I think, so easily disposed of, and needs to be looked at all round. The history of one of the greatest triumphs of a political economy worthy of the name, that of the reform of our customs' duties, points quite in a different direction. From a purely fiscal point of view, there may be exemptions which serve to feed the revenue. *Primâ facie*, it is exceedingly unjust to let A's fruit come in free, and to tax B's sugar; but letting in untaxed fruit brings in sugar for taxation, and the result is more revenue. Our stamp duties generally, although the burthen of them has been lightened, have never yet been scientifically revised. What could be more absurd than the

attempt of the Stamp Office, a few years ago, to levy *ad valorem* duty on building leases? What is the benefit of the *ad valorem* duty on such a lease to the Treasury, compared to the continuous stream of fiscal benefits which the lease itself represents? house tax, property tax, stamps on subsequent transfers, personal taxes on occupiers, to say nothing of local rates. Such an instrument is really the raw material of taxation, and deserves just as much to be exempt from duty as the raw material of manufactures. The same applies to all conveyances for building purposes and building covenants. And it might well be found that the formation of associations for certain purposes is likely to lead to such a development of fiscal resources as to make it of sound policy to grant them some initial exemptions.

A larger question (and one which affects equally the heads of aid to be subsequently considered) is that of compensatory advantages generally. If friendly societies really relieve the poor rates to any large extent, it may be quite worth while, in a well-considered national economy, to grant them even large remissions of taxation, if such remissions help them efficiently to fulfil their purpose, since the immediate burthen which is thereby laid on other taxpayers may be far more than compensated by that from which they are ultimately relieved. And thus, whilst I think that every existing exemption from taxation requires to be very carefully scrutinised, I think it is a very hollow cry which calls for the immediate abolition of all such exemptions. I believe that in a well-considered national economy judicious exemptions from taxation would be found in every branch of revenue as fruitful a source of fiscal benefit as they have been found to be, by now the existence of a generation nearly, in our ancient system.

I cannot, moreover, leave this head without pointing out that there are nominal exemptions which are not real ones. Take, for instance, the exemption from income tax of the profits of industrial and provident societies, which has been made a strong handle of against them by societies for the protection of trade. It is easy to show that in its present shape this exemption is, in a large number of cases, no exemption at all, and that, on the contrary, such bodies are subject to duty where private persons would not be. So far as their dealings are confined to members—and except in the case of the large London stores, by far the larger proportion of their dealings invariably is—their so-called profit is no profit at all, but represents merely the saving of the difference between the wholesale and the retail price, *minus* cost of management; and it would be as unjust to tax me on that difference, if I bought a whole

chest of tea for myself, as it is now to tax the 11,000 members of the Leeds store upon it, because, instead of saving it at once as I should do, they wait three months or six months before apportioning their shares of it amongst themselves. And even as respects their dealings with the public, the position of these bodies is no better than that of any other firm, except that, for the public convenience, a different mode of procedure is adopted. In an ordinary firm, the profits are assessed in the first instance, but any partner whose income is under the assessable amount may claim exemption, so that in a firm of two, whose profits did not amount to 200*l.*, and were divided equally, no duty would be paid. In an industrial and provident society, where the interests of individuals are limited to 200*l.*, the presumption—and except in the large London stores, the universal fact is—that the great bulk of the members will not have assessable incomes. It is, therefore, to the great convenience of the Exchequer that, instead of assessing the whole profits at once, and then having to deal with a host of claims to exemptions, amounting to hundreds and thousands perhaps, it should at first leave the joint profits unassessed, but, as the Act directs, be supplied with a list of the persons receiving profits, and of the amounts received by them, in order to assess those only whose incomes appear, or may be presumed to be, of assessable amount. The exemption enjoyed by friendly societies, it may be observed, is absolute, provided they observe the statutory limitations as to death payments and annuities, which is much less defensible.

8. Direct pecuniary aid. Not to refer to subsidies to steam-packet and other companies, obvious instances of this will occur to every one in the large rates of interest formerly paid to Savings Banks and friendly societies, and which have entailed, and still entail, a heavy burthen on the State.

All such subsidies are no doubt *primâ facie* objectionable. It is the case of the fiscal exemption reversed. Instead of leaving money in one man's pocket which must be taken out of another's, money is taken out of one man's pocket, which is put into another's. But the same compensatory qualifications apply to both cases. Just as it may be worth my while to leave a sovereign in a man's pocket, which I might take, in order that he may make two guineas out of it, and give me one, so it may be worth my while to give him a sovereign for the same purpose. A judicious fiscal subsidy may, and should, give more than equivalent benefits in return to the community. And the subsidy has this advantage over the exemption, that it can be more accurately gauged, and that its results can be

made to stand out far more clearly on a profit and loss account. I do not think, therefore, that such a mode of aid should be lightly put aside. All forms of aid are, in fact, the price paid by the State for certain advantages which it expects the community to derive from the person or persons receiving the aid. The question must always be whether those advantages are worth the price paid, whether in hard cash, as by direct subsidy, or in any other shape.

Before quitting this subject, however, I must advert to one singular feature affecting what I must term the present subsidies to friendly societies, viz., that the loss which they have occasioned, and still to some extent occasion to the State, has been and is a perfectly gratuitous one. There never was, and there is not, the slightest need for incurring it. The State is paying (allowing for leap year) something over 4*l.* 11*s.* 3*d.* for certain sums of money, something over 3*l.* 16*s.* 0½*d.* for certain other sums, and investing at 3¼ or thereabouts. Of course, it loses money by the transaction. Meanwhile, through another of its Departments, the Public Works Commission, it is lending other money, often at 5*l.* per cent.; and over and above this, it is always possible, especially to a large dealer like the State, to make more than 4*l.* 11*s.* 3*d.*, let alone 3*l.* 16*s.* 0½*d.* out of its money.

But the very absurdity of the result indicates a mode in which, without direct subsidy, a very efficient aid can be rendered to societies. Few things are of more consequence to a friendly society than a good rate of interest for its investments. There is no reason why the State should not give it this rate, without any loss, in the long run, to itself, simply by not confining itself to its own securities. I have heard arguments from very high authorities to prove that this is impossible (although those same authorities do the very thing in a small way for Naval Savings Banks), but have entirely failed to be convinced. The German Government had no scruple in investing a large portion of the French ransom in American Five-Twenties, simply for its own benefit. Let the State invest the friendly societies' money in these or similar securities, and it will probably be able not only to give them easily at least from 4*l.* to 4*l.* 10*s.* per cent.—a rate which for many would represent the transition from insolvency, or something closely bordering on it, to solvency, if not prosperity—but also to lay aside a reserve fund for contingencies, if this were deemed needful.

To conclude. The only form in which State aid appears to me absolutely condemnable is, when it affords to certain classes of bodies privileges against individuals; but all special

remedies against wrong-doing are open to objection. In every other of the cases mentioned, the mode of aid requires to be considered on its merits.

Mr. George Potter, of London, read a paper on the subject. The number of members in the various burial societies, he said, according to Sir Stafford Northcote's estimate, was 4 millions, and their funds above 12 millions. One million people, by far the larger number of them belonging to the working classes, were members of building societies having a subscribed capital of 9,500,000*l.*, a deposit capital of 6,000,000*l.*, assets amounting to 17,000,000*l.*, and an income of 11,000,000*l.* The membership of trade societies might, at the very lowest, be stated at 1,200,000, and those connected with co-operative associations might be put down at 400,000, the amount of capital invested at 2,800,000*l.*, and the business done annually at 11,500,000*l.* These facts showed that the people of this country were pursuing vigorously a wide and varied work of providence; and he held that to touch these associations even with the best intentions would call forth a general and sturdy opposition. There was one point he desired to insist on, as a cardinal point, in regard to all great movements in which working men are largely concerned—namely, that interference by Governmental or Parliamentary action, except to remove obstacles out of the way, was a grave mistake. He said, further, that if such interference be seriously in opposition to the wishes of the parties concerned, it was a grievous and most mischievous blunder. It diminishes the working men's sense of their own independence—of their freedom of action in the promotion of their own interests, and it deadened the initiative thought and energy of action that gave birth and vigorous life to popular associations. It was undeniable that certain evils are connected with nearly every form of these popular associations; but the evils attending the working of popular associations were, as a rule, grossly exaggerated. Even Royal Commissions had no royal road of escape from the exaggerations of prejudice and fear; nearly every apprehension connected with great popular movements was distorted and enlarged by the alarmed imaginations of the ignorant, the prejudiced, and the interested. Indeed if only a tithe of the evil predicted of working men's movements within the last twenty years had come to pass, the country would have been ruined down to its foundations long before now; but here we are, as firmly set in the sea as ever, and better prepared than ever to face the future.

DISCUSSION.

Mr. William Holms, M.P., said the statements made in the papers showed the magnitude of the operations of these societies. He would give some other instances. The Manchester Unity, one of the secret or affiliated societies, had no fewer than 436,000 members, with during the last five years an average annual income of 560,000*l.*, and from this annual revenue they paid in cases of deaths and sickness of members no less than 400,000*l.* a-year. In Glasgow, there were no fewer than 175,000 members connected with five friendly societies alone, exclusive altogether of members of such societies as the Manchester Unity or the Oddfellows. The question was doubly interesting to those who did not belong to the working classes; for if we were to remove our pauperism, and reduce our poor rates, we must look to two great levers, namely, education and the inculcation of thrift and providence on the part of the working classes. Dr. Cameron had referred to cases of insolvency in some of these societies, and from time to time much had been said upon the same subject. In the early history of these societies, the rates of premium were too low, as a rule; in fact, the question of rates of premium to be charged at various ages was but little understood. Many societies had endeavoured to obviate the difficulties in which they found themselves pecuniarily. The course adopted, for instance, by the Manchester Unity, was that of setting vigorously and honestly to work to understand their position, and at enormous cost and great trouble they had all their assets revalued, and boldly stated their position—namely, that they were much behind. They raised their rates of premium, and he understood that they were now in a sound position, one which commended itself to the working classes. But another course had been adopted by many societies. When, at the end of any given year, they found their financial state in what they thought to be an undesirable one, they made a levy—that is, they asked each member to pay so much. It was, therefore, wrong to assume in all cases, that because a society was not sound upon a purely actuarial basis, it would not fulfil its obligations to its members. Looking to the whole history of these societies, hitherto Government interference had been worse than useless. It had, in fact, been most misleading. The Registrar granted a certificate without ascertaining, and without being bound to ascertain, whether the rules were satisfactory, and if the rates of premium were placed on a sound basis. The consequence had been that many ignorant persons had been misled by the fact of societies being registered by Government. The laws affecting these societies were most unsatisfactory; but it must be admitted that both the present and the last Government had shown the greatest anxiety to put them on a sound footing. The Royal Commission, appointed in 1871, had issued several most important blue books on the question, and had listened most attentively to any recommendations made to them by the working classes themselves. The latter, on the other hand, had also shown the deepest anxiety to have satisfactory legislation on the question. In Glasgow, the representatives of eight or ten most important societies,

about a year ago, met frequently, in order to consider and lay before Government what they deemed would form the basis of sound legislation. Their recommendations would be found in the last report issued by the Royal Commission, and, he believed, would commend themselves to the good sense of the country. Last year, a deputation of gentlemen who took a deep interest in the question went to London to make a representation to Government on the subject. They represented friendly societies throughout Great Britain with an aggregate membership of 1,645,000. In the way of legislation, they wanted three distinct things:—1. That registration in one country should apply to the three parts of the kingdom. Hitherto it had not been so, the result being great inconvenience to small societies. 2. That registration should be a certificate vouching for the fact that the rules were satisfactory, and rates of premium thoroughly sound. 3. They desired that there should be a periodical inspection of the books, and power given to withdraw the certificate in the event of any society's affairs being conducted in an improper manner. The question now was what the legislation should be? The Friendly Societies' Bill was in some points very good; but on two important heads it was entirely deficient, namely, that registration was not to be held as a certificate that the rules were sound and the premiums on a satisfactory basis; nor did it touch upon the question of compulsory registration. On this question he agreed with his friend Dr. Cameron that, unless registration was made compulsory, those societies which were not sound would avoid registration. He could foresee that only those societies which were thoroughly sound and honest would be registered, while those which were not honest would avoid registration. The benefit to be derived from compulsory registration outweighed, in his opinion, any difficulties that might be in connection with it. Mr. Holms concluded by expressing an earnest hope that any legislation which might take place during the ensuing session would be such as would put friendly societies on a thoroughly sound basis.

Mr. E. W. Brabrook (Assistant-Registrar of Friendly Societies) held that registration should be universal, but not compulsory. He hoped, by means of wise legislation, that result would be attained. He did not think that by making registration compulsory it would ever work, and he did not see how it could be made to work. The attempt to do this had been made by means of the Joint-Stock Companies' Act; and what had been the result? No penalty was provided; and if there was a penalty, upon whom would it fall? He supposed it was a misdemeanour for anybody to disobey that Act; but who committed the misdemeanour? The whole twenty-one, or the twenty-first person of the company? Therefore, the idea of the prosecution for a misdemeanour of twenty-one persons could not possibly be carried out. In a word, he did not see how it was possible to enforce any law making registration compulsory, if people chose to unite together without registration. To make the law so comprehensive and so applicable to every kind of association, registration should be accepted by all persons as their normal condition. It would be advantageous to the Department with which he was connected if it were empowered to give some actuarial advice, but he did not think it should be able to compel changes in the

organisation of the societies. In the report, which was not yet published, it would be seen that six societies had been dissolved during the past year, owing to their insolvency and inability to meet sick claims. One thing, he hoped, would result from the recommendation of the Commissioners and from future legislation, namely, the power to combine societies which are hereafter established under one form, however varying their purposes, and which had now no legislative recognition.

Mr. ARCHIBALD MALCOLM (Glasgow) could not see how registration could be universal if it was not made compulsory. The papers had surpassed anything that he had expected, both in moderation and depth of thought; but there were some points from which he begged to differ. Dr. Cameron had based his assumptions on the reports of the Royal Commissioners, but he had no hesitation in saying that the Report on Friendly Societies in the blue book was overdrawn, and was an exaggerated portrait. Was it not a matter of fact that the evidence taken by the Royal Commissioners, and published in eight or ten large volumes, was given by persons of questionable character? It had been stated that nineteen Acts of Parliament had been passed on the subject. Did it not strike legislators that the reason why they had not been effective was, perhaps, because Parliamentary interference was altogether inapplicable to the subject; and it was quite possible the twentieth Act of Parliament would be shelved in the same fashion as the others had been. He objected to Government interference, because it would, in a certain degree, hamper the efforts of the working men themselves; and the giving of almost dictatorial powers to the Registrar would not assist societies. The present proposed bill contemplated giving the Registrar discretionary power for the drawing up of regulations for the better working out of the Act. This was giving the Registrar powers which ought to be enforced only by Act of Parliament.

Mr. GEORGE HOWELL (London) was of opinion that Government was going to interfere to a greater extent with societies than in the past. He believed members of societies would look calmly and fairly at any proposition of the Government. He felt, with Mr. Potter, that in dealing with this subject it must be dealt with tenderly and quietly. He was not prepared to admit that many of these societies were not solvent, although he could not submit statistics prepared by actuaries.

Dr. NEILSON HANCOCK (Dublin) said some of the propositions which had been made by Dr. Cameron were thought by some persons to be of the nature of unfair and unjust interference. Three of the proposals, however, were not novelties in legislation. In the first place, there was the proposal of not submitting questions to arbitration, but appealing them instead to the local tribunals. That proposal was in accordance with Scotch precedent, where every partnership must be registered, and disputes were settled by the local tribunals. The next proposal —the registration of all societies—prevailed in some Continental countries, where no one was allowed to trade in them except under registration. The third proposal was that any company which professed to do certain things according to certain rules, and did not carry out what they professed, were liable to have the business stopped by a public officer. We had a remarkable precedent for that in the country foremost in the world—

the United States of America—where, also, any insurance company was bound, at any moment, to submit to the investigation by a Government officer, and if it had not assets to meet their engagements, such officer could stop their business. This, he considered, was a far better plan than that of giving advice. Whether a company was solvent or not, was a matter to be decided by actuaries.

Mr. F. G. P. Neison (London) said that, speaking generally, the less legislation we had on this subject the better. We had no reason to think that the members of these associations were desirous to do anything but amend their institutions; and if in the course of a few years they did not take the steps recommended by the Royal Commission, it would then be time to apply for compulsory powers. Only two things were absolutely necessary: the first was the adoption of a proper rate of contribution, and the second was every now and then to examine whether these rates of contribution required any alteration. Thus, speaking generally, for existing societies all that was necessary was periodical valuations—for future societies the starting with adequate rates of contribution. These points he would leave to the sound common-sense of the members, and they would so be more satisfactorily settled than by laws laid down by Act of Parliament. In legislating for these institutions there was this to be borne in mind, that at present the advantages resulting from registration were so few, that practically they amounted to merely depositing a copy of their rules. If more restrictions were imposed, they would have the effect of merely driving away many societies that otherwise would register. If registration gave legal security, then it ought to be uniform and compulsory; and, on the other hand, if it was not compulsory, it ought to be a stamp of solvency as well as legality. At present, there was the anomaly that a society might be legal and yet utterly insolvent. Again, a society might be illegal, and yet perfectly sound and prosperous. If the first plan was adopted of merely making registration compulsory, societies would be divided into two classes. In the one case it would show that the society was registered, but in the other it certified that the society was not only legal, but that everything possible had been done to ensure its solvency.

Mr. T. Y. Strachan (Newcastle-on-Tyne) said that no doubt the recommendation of the Royal Commissioners carried interference to a great extent. In general terms he objected to interference, although to some extent it was necessary. Those who objected entirely to interference would serve their purpose better if, with their experience of societies, they enlightened them as to how far Government might interfere with propriety. Although he desired that Government should interfere as little as possible, he did not object to everything being done to make societies stable, solvent, and reputable. He was quite alive to the difficulties which would result from any attempt at compulsory registration except it was simple, and gave a legal remedy to the society against the officers of the society, and to the members against the society. How to compel people to register in so many of these societies founded for so many objects without enforcing a penalty, and how to enforce a penalty for clubbing together in these forms, seemed very difficult. Therefore, the principle he would point out would be to create these societies into corporations which

could sue and be sued. He considered that the recommendation of the Royal Commission, if only carried out so far that a registrar might audit for them, or that local auditors be appointed, would enable the public to judge, from the character given to those societies, which were the good and which were the bad societies. He could not see how anyone would object to that small amount of interference; and if that was done, it seemed to him that they would get to the real root of the matter. Interference might be made to this extent without meddling with the details of management.

Mr. CROSSLEY said that of several different societies he knew when a boy, every one of which had been largely contributed to by working men, were now not in existence. Many old men who had contributed for a number of years, the average being something like forty, were consequently now left without support in their old age. There was a custom in many friendly societies to apply a sum of money to cover other things than that for which it had been contributed to the funds of the society. He believed this was a very injurious thing, and the societies, if they put a stop to this practice, would be found to be very much more productive of good to the commuity than otherwise.

Mr. BOTLEY (London) considered compulsory registration a great necessity. Very great caution, however, should be used as to any alteration of the law. He agreed with Mr. Potter that it was a great mistake to write down the societies. They ought, rather, to write them up, and bring the societies up to that standard.

INTERESTS OF THE UNITED KINGDOM, INDIA, AND THE COLONIES.[1]

What are the best means for drawing together the interests of the United Kingdom, of India, and of the Colonies? By the late C. W. EDDY, Honorary Secretary to the Royal Colonial Institute.[2]

THIS question, I think, implies that the retention of the Colonies in political Union with ourselves is desirable,

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[1] See *Transactions*, 1872, p. 142.

[2] Mr. EDDY had been requested to undertake to open the discussion of this question, and he had very readily and courteously complied with the request made to him. It was fixed that the question should be discussed on Monday, October 5. On the morning of Saturday, October 3, Mr. Eddy was proceeding to join an excursion party to Loch Lomond, when on his arrival at the station he fell down and immediately expired.

Mr. H. W. FREELAND, who had been requested by the Chairman to read Mr. Eddy's paper, introduced it with the following remarks:—Our chairman has called upon me to discharge a duty which it would not be possible for any man to undertake without feelings of deep pain and sorrow. So recently as on Friday last I was talking in our recep-

and has passed beyond the stage of argument. In fact, whatever diversity of opinion may have formerly existed on the Colonial question, I believe all political parties now profess the same principles, and that all men who have given any thought to the subject are agreed that they should be retained in close union, and that it would be a great misfortune not only to England and her Colonies but to the best interests of the whole human family if this great Empire should be broken up. The party which within the last two or three years have advocated with so much pertinacity the gift to the Colonies of what they were pleased to call their freedom, professed at the same time a desire to convert the existing relationship into an alliance, but they have discovered that their advocacy was a somewhat thankless office, that their professions

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tion room with my lamented friend, Mr. Eddy, about the paper which I now hold in my hand, and some extracts from which our chairman has requested me to place before you. Mr. Eddy had prepared it, and it had been arranged that he himself should read it to you to-day. Providence has willed it otherwise. On Saturday morning I was summoned to the railway station, by our Assistant-Secretary, Mr. Robinson, but only to see a valued friend in that shell which had been substituted with a suddenness indeed appalling for a carriage in an Excursion Train. It may, perhaps, be soothing to his widow and his surviving relatives if I state that, when his head was twice raised that I might see his face, there was upon that face, still warm, an expression of tranquillity and of sweet repose which seemed to intimate that one of the best, and tenderest, and most disinterested of human souls had found rest in the bosom of its God. May God grant to his widow in her affliction, and while she mourns a loss which is for her irreparable, that consolation which He alone can give, and of which she stands now so sorely in need. I have used a significant word, 'disinterested.' Give me leave, in a few brief sentences, to say why I use it. For some years past, as a humble member of the Council of the Royal Colonial Institute, I have been associated with the late Mr. Eddy in the work of that Institute, for which he acted as Honorary Secretary. During the whole of that time he has laboured unremittingly, doing at times the work of an ordinary clerk, at other times discharging delicate duties with tact and ability, without receiving a single shilling, for he would not have accepted it, in the shape of salary or reward. His efforts will survive in the grateful recollection of those who were acquainted with him. His memory, without a shade to dim its brightness, will long be cherished by a large circle of friends both in Great Britain and in her dependencies, as a sacred trust which they hereafter will guard with affectionate solicitude. If any one inquires into my late friend's past life and efforts, they will find that I have used the language, not of partial friendship, but the language of gratitude, and of strict and simple justice.

of good will were mistrusted by their would-be clients, that the colonists did not consider themselves as otherwise than free, and had no mind to venture on rash and perilous experiments.

Let it be granted then that close union is desirable. What are the best means of strengthening the bonds that unite the Colonies to us?

The usual answer to this question is, the confederation of the Colonies and the Mother Country.

This is the object which the principal thinkers and writers and speakers on the great theme of the unity of the Empire have of late years with common consent indicated as the one to be kept steadily in view. But how is it to be best attained? It is a thing not to be settled with a stroke of the pen, or achieved in a day, or without much thought and preparation of men's minds. The confederation of small communities into powerful States, and their consolidation into Empires, is the evident tendency of the day, and as surrounding States thus grow more united and more powerful it becomes the more imperatively necessary that the remaining ones should follow the example if they would secure their independence, but we have seen in the case of other great nationalities that all healthy organisations of this kind are of slow and spontaneous growth, and refuse to be transplanted or forced.

I agree in thinking confederation the apparent means under Providence for attaining national Unity, for consolidating the British Empire and maintaining it in its integrity. But I think its advantages may be secured, as I hope by-and-by to show, by working on the ancient lines of the constitution, and avoiding such startling proposals as are apt to unsettle men's minds, to shock the timid and alarm the cautious, to disquiet men of business, and awake the fears of the taxpayer, and perhaps cause a panic amongst the fundholders.

I think they may be secured without the arduous and perilous and revolutionary process of drafting a federal constitution and offering it to all the scattered members of the Empire, for you must either win their free assent or impose it on them as a conqueror. The latter method is repugnant to the nature of Englishmen and is not to be thought of, and the former is beset with difficulties, for dissentients there would certainly be, and what can be done with them. We have a pregnant instance of such difficulties in the case of Newfoundland, which refuses to join the great Canadian confederation, though one would suppose therein lay her clear interests and manifest destiny. And again, in the dissatisfaction already

expressed in the Leeward Islands with the confederation which a few years ago was effected under pressure from the Home Government, but which is found to work with so much friction that unless held together by a continuance of this pressure it would probably fall to pieces before a fair trial had been given it.

No doubt this friction will be overcome, and the machinery will eventually be got to work smoothly. I only mention it as an instance of the difficulties involved in the formation of a durable confederacy under outside pressure, in the absence of any strong and overmastering necessity.

In strong contrast to such instances of the difficulties inherent in what I may call the artificial construction of confederacies, has been the great and highly successful scheme for the confederation of the North American Provinces into the Dominion of Canada. A yearning for this union arose spontaneously in the provinces out of a sense of weakness in presence of the neighbouring United States towards the close of the civil war, from which that federation was emerging with embittered feelings towards everything English. The movement was inaugurated at a colonial conference at Quebec, and meeting with due encouragement from the Home Government, has resulted in a stable and vigorous organisation which will probably form a model which will be widely copied.

No circumstances have as yet arisen to force on the public mind of the whole Empire a conviction of the necessity or advantages of confederation, and any authoritative attempt to force it prematurely into prominence would in my opinion be fraught with difficulties and dangers little thought of by many who are dazzled with the brilliancy of the prospect. It would probably kindle into flame a host of jealousies and rival pretensions now happily slumbering; it would almost certainly be misunderstood; be regarded with suspicion by some colonists as the project of a school of doctrinaires who cannot be contented to let well alone; by others as intended to cover designs on the freedom which they now enjoy, and on the disposal of those revenues over which they have now such absolute control. And those who should take this view have some ground to go on, for if confederation means anything, it implies contribution from all the members, in proportion to their means, to the maintenance of the independence, the support of the power and authority and dignity of the whole. And again, by a certain class of minds, confederation would be regarded as synonymous with republicanism pure and simple; whilst others would think that to be complete it should include all

English speaking communities throughout the world, and that the post of honour in such a union should be assigned to that collection of English States which first conceived the idea, and carried it into effect in defiance of the mother country, and have maintained it successfully against foreign and domestic foes for near a century.

Such considerations lead me to fear that direct proposals of this nature emanating from the central authority, and brought forward in the absence of any common danger or of other urgent reason not admitting of much deliberation or delay, would be of doubtful success and be attended with the dangers of all proposals which are in advance of public opinion, and for which the minds of those whom they are intended to benefit are not prepared. Circumstances may, however, at any time arise without much warning which will make it a matter of regret that this great subject has not occupied the attention it deserves, and that all that is possible has not been done by our statesmen to prepare the public mind for its contemplation, and to remove obstacles from the way of its accomplishment whenever the crisis may arise. What are these obstacles, and what is the nature of the preparation that may be made?

First of all, the weaning process must be abandoned, and the 'gift of independence' theory rejected, and the exasperating hints to our Colonies that they are free to leave us dropped. In lieu of these, Englishmen at home and in the Colonies must be accustomed to regard themselves of one family, bound together by ties indissoluble except by common consent—as citizens of a common country, and that no mean one, but a nation to be proud of with the pride of a *civis Romanus*. But this implies the maintenance of the honour and prestige and dignity of the metropolitan state, and is altogether incompatible with the low views of a nation's responsibilities, the mean and grovelling doctrines of expediency and submission to circumstances, and readiness to put up with insults for the sake of peace and retrenchment, and shrinking from the assertion of the rights, which have of late prevailed amongst us.

To quote the noble language of the member for Aberdeen, and present Agent-General for Canada:—'I know no humiliation for a people greater than the decadence of national sentiment, no danger to their permanence or greatness so imminent as to see them bent at all events upon success before honour, on peace at the expense of conscience, on ease to avoid sacrifice. The ignoble fate which has befallen all such nations is, to my mind, one of the few gratifying compensations of history, one that satisfies with peculiar relish our human instinct of

right. Believe me, this sense of national honour is no intangible thing. It is that which prevents a people from sinking down to a community of tradesmen, and which prompts some of the best and healthiest activities of life. It were better that a nation should utterly perish in the agony of a noble purpose, than languish in a syncope of luxurious indifference to honour, to duty, and to glory.'

We may rely on it that the possession of colonies, like other great possessions, can be retained only by the strong, by those who are strong not only in material resources but in moral qualities such as inspire respect and affectionate attachment; hence the retention of colonies which add so much to the dignity and power of a State is one great reward of public virtue, and should act as one of its chief stimulants. If a nation loses its self-respect, how should it expect to retain the respect of its children?

Instances enough of the 'ignoble fate' referred to above are to be found in the history of former colonising nations, such as Spain and Portugal, which became corrupted by the wealth brought them by their colonies. Their public virtue and national sentiment decayed; they earned the contempt of their dependencies, and their rule was thrown off in spite of all their efforts to retain it. So it was with us in the case of our original American colonies. We lost them in an age of public corruption, and in consequence of the temporary degradation of the national character, of which the unjust attempt to tax dependencies without extending to them the concurrent right to representation was but a symptom.

The shock given by their loss and the dangers to which the nation found itself exposed by the alliance of these colonists with our hereditary enemies acted as a tonic in renovating its former vigour, and have preserved it, let us hope, to work out the great purposes of the Creator upon earth.

But the history of the decay and break up of these Transatlantic colonial empires suggests a question which it will be well to consider before proceeding further in the advocacy of confederation; viz., whether there are any inherent and insuperable difficulties in the proposal to confederate the British Empire which should make it idle to pursue the theme.

Mr. Gladstone, in a debate which occurred when he was Prime Minister, last year, said that there are such difficulties; that the great distances and the wide extent of sea that rolls between England and her Colonies present a natural and insuperable obstacle to intimate political union. To the mind of the great scholar, the *oceanus dissociabilis* appears to have

decided the whole question in the negative; but the ocean barrier is a Roman, not an English idea. To a great maritime and commercial nation, a race passionately fond of the sea, a seafaring people in whom nautical instincts have for ages been hereditary, it is the ocean highway that is the great bond of union between distant lands, alone rendering intercourse between them safe and easy. As to distance, the scattered elements of a world-wide empire must necessarily be far removed from one another, but the ocean steamship and the submarine cable have annihilated distance, and have brought Australia nearer to London than Glasgow was at the time of the union. Without this ocean highway, commerce on a large scale could not possibly be carried on. Improve railways as you may, I will leave it to a Glasgow audience to compute what would be the cost of a ton of jute brought overland from India, or of a chest of tea from China. Railways are constructed cheaply in America, yet even there it is well understood that the cost of transporting corn for a very few hundred miles by railway is more than the corn is worth at market, whilst, on the other hand, corn is brought by sea over a great many thousand miles, even from such remote distances as California and Australia, to London, and merchandise from California to New York prefers the long sea route to the much shorter land one. As an Englishman, I say that these islands of ours are contiguous to all lands washed by the ocean tide, and that their inhabitants are our nearest neighbours. Our Colonies were won and annexed by Great Britain as mistress of the sea, and long may they be retained by her whose sceptre is the trident; mere distance by sea is no barrier to intercourse, and it would be just as reasonable to argue that the silver streak of sea that separates Ireland from Great Britain is an insuperable barrier to union. I maintain against Mr. Gladstone that there is no essential difference in the two cases. Would our State and nation ever have been built up if such difficulties had been held to be insuperable, and if feeble and timid counsels of this kind had been allowed to prevail? Happily our fathers were made of sterner stuff, and were apt to see in difficulties, chiefly obstacles for genius and energy to overcome. They won, and have left us a great inheritance. Shall we not hand it down at least unimpaired to our children? It is worthy of remark that Mr. Gladstone has not thought it worth his while to visit any of our great Colonies, and that it has not been the habit of English statesmen to visit any of the distant parts of the magnificent empire whose destinies are confided to them. There would be great and obvious advantages in their so doing, and thus

becoming personally and familiarly acquainted with the various parts that constitute the 'one stupendous whole.' It should form a part of the political education of all public men. They would then learn to regard colonists not as aliens *penitus toto orbe divisos*, but as Englishmen, and to think less of the difficulties of union. Again, those who urge insuperable difficulties in the consolidation of an island empire are not in the habit of suggesting any in the maintenance of the wide domain of the United States, which stretches over a breadth of above 3,000 miles of land, partly desert, from New England to California, the intercourse between the extremities being almost wholly by sea, nor in that of Russian power over such distant provinces as Kamskatcha and the Amoor, separated as these are from the seat of Government by thousands of versts of frozen continent. Here the maintenance of authority would indeed be difficult, if not hopeless, were it not for the ocean highway which renders political as well as commercial union possible. I have dwelt with some iteration on this part of the question, because I know that to many minds it presents great difficulties, but I think we may fairly dismiss it by asking what essential difference there is between the conditions of commercial and those of political union, that should make the very circumstances that favour the one prohibitive of the other, and leaving it to our opponents to show that any such essential difference exists.

But it may be urged how few confederacies have succeeded. The history of the world shows but two that have endured for a single century—those of Switzerland and the United States; but this is to confound federal republicanism with confederation of states under monarchical supremacy. The chances of success are certainly against the former. The domestic history of ancient Greece is little else than a record of its failure; it has been tried by almost every state of the old and the new world that has shaken off a despotism, and has almost invariably failed; but on the other hand, what are the limited monarchies of which ours is the model but groups of States with more or less independent local powers which have arrayed themselves under a common executive with a common legislature for federal purposes? The kingdom of England grew out of the Heptarchy, and the British power out of the union of three kingdoms.

So have grown the present France, and Spain, and Italy, and Holland. And this tendency to federalism under the monarchy is not extinct amongst us; it needs not to be reinstituted, it is growing under our eyes with a vigorous vitality, and what is principally needed is that our statesmen should see and recog-

nise and respect it, not interfering with it except so far as to remove out of its path the obstacles which I shall presently indicate. Having then met these preliminary objections to the adoption throughout our Empire of the federal principle, and shown them, as I hope, to be imaginary, let us inquire into the history of some recent instances of its adoption, that we may see if we have ought to learn from them; and first, of the great neighbouring State which furnishes the most striking and familiar example. The old German Empire had been broken up into a number of petty States which had widely diverged from each other, as drawn in different directions by their separate interests and affinities and creeds. The Germans had long been sensible of the weakness arising from division, and had earnestly desired reunion. This had been attempted through the Frankfort Diet, but had failed for want of a strong executive in a *εἷς Κοίρανος* whose claims to lead and represent the confederacy should be readily conceded and cheerfully obeyed. A common danger, and a great and successful war waged in common with an alien race under the leadership of one of the States, at length afforded a far-seeing and resolute statesman the desired opportunity of welding these States again into one Commonwealth; but he saw that a federal union, to be capable of defying the antagonistic forces, social and religious, which it would contain, and which would be arrayed against it as soon as the crisis which had called it into existence was passed, must be rooted in feeling and sentiment, and not merely based on the convenience of the passing hour. His aim accordingly was not merely a Federation of States but National Unity, and he attained it by appealing to the strong national sentiment of patriotism, by the adoption of a national flag as a symbol of the essential brotherhood and unity of the great German family, and by reviving the dignity and renovating the splendour of that ancient German Empire which all Germans alike revered, in the person of an Emperor surrounded by a court. Whilst all German States were to retain their local self-government under the Empire, all were to be admitted to equal participation in its honours and privileges which would throw in their lot unreservedly for weal or woe as members of it, and to that end would help to form and maintain one Imperial Army and Navy, and contribute in proportion to their means to its necessary expenses. Thus was the consolidation rendered complete, the people felt that they were again a nation, and that their true career had at length begun.

Again, how was Italy confederated? When the presence of a common and imminent danger forced on Italians the

urgent need of union, it was effected by raising to sovereign power an ancient and princely house, which had long been distinguished for its devotion to the popular interests and struggles with the common enemy; by extending its sway over the whole congeries of petty states, but, at the same time, extending to all these equal rights and equal participation in the honours and privileges of the newly-founded kingdom.

In like manner, France has been preserved from dissolution, and Spain from dismemberment, during their protracted troubles, by the sentiment of nationality, and by that alone. It is the strongest bond of union, and the greatest safeguard against anarchy; and yet there are philosophers and, no doubt, well-meaning men amongst us (some of them men who have climbed to high office in the state) who decry and ridicule the sentiments of nationality and patriotism as relics of barbarism unworthy of a thinking age. Happily, the world is not yet governed by the philosophers.

Thus, the Empire of Germany was restored, and the realm of Italy founded, by appealing to a common and noble sentiment, and by placing the States which responded to the appeal on a common footing of perfect equality and brotherhood. They are formed on the eternal principles of fealty and honour and justice, and are in harmony with the higher and nobler instincts of mankind, as well as with its more vulgar material interests. These may seem simple and obvious principles, but they lie at the root of the whole question, and are the indispensable conditions of a lasting union—whether between a mother country and her colonies, or between separate States. Do we comply with these conditions? We, like the Germans, have an ancient monarchy, of which all Englishmen throughout its wide domain are proud. It is a monarchy which has for eight centuries survived the attacks to which it has been subjected from within and from without; which, no less by its glorious annals than by the blessings it has conferred and the benefits it has secured to its subjects wherever scattered throughout the world, has won the esteem and honour of all men, and is, probably, at this time more deeply rooted in the affections of the whole English race than at any former period. Is not this grand and ancient monarchy the proper instrument, under Providence, for uniting and retaining in close and brotherly union all the scattered communities of Englishmen? To its influence let those testify who, like myself, have witnessed in the Colonies the deep and earnest sympathy which the trials of the crown, in foreign war and in domestic sorrow, have called forth from men of all political parties and of every shade of opinion—men who agree

on no other subject, and whom it would be hopeless to attempt to unite on any other principle. The Throne of England is clearly the rallying point destined to reunite us all.

Under this ancient and much-venerated monarchy there has grown up a constitution which is not only the pride of British subjects, but has formed a model for many another nation and many a nascent community. Under this monarchy and the free institutions which the central and august authority enthroned in the hearts of all have alone rendered possible, the race whose birth-place and cradle was within these small islands is becoming the master race of the whole world, and is growing into a power which, united, is irresistible, but if split into fragments and divided against itself, would, at all events in its younger branches, be at the mercy of other great and ambitious powers. The natural instinct of these younger branches is for continued and, if possible, closer union; and it is not surprising that they should have indignantly resented the designs of that school of doctrinaires which proposed to wean and alienate them from us (designs, however, of which their very authors appear now to be ashamed).

But if there exists the common centre to which all naturally gravitate, and the common instinct of union, what remains to hinder or retard its accomplishment? This remains; that all the States which constitute the Empire should be placed on a common footing, practically as they are theoretically, and be treated habitually as integral parts of the Empire. That the common principle of equal rights be observed—without favour or partiality—that all loyal men, in whatever part residing, should be regarded as alike the subjects and entitled to the equal favour of the crown. Some people may innocently ask whether they are not so regarded and so treated, and I answer, emphatically, *No*, for that the subjects of the crown in distant lands are treated more as aliens than as loyal subjects, and that a persistence in such invidious and unwarrantable distinctions will endanger the existence of the Empire, and until redressed will certainly be an insuperable barrier to any closer union. What are these invidious distinctions which are upheld between natives of these Islands and their brethren in the Colonies, as if intended to inform them that they are not fellow-citizens with us of a common country? I proceed to enumerate some of them, and in doing so shall quote largely from colonial writers and statesmen of eminence, because it will thus be seen that they are no imaginary grievances springing from the fertile brain of a sympathiser, but real ones keenly felt by colonists. Leading colonists are not admitted

to share in the old established dignities of the Empire nor afforded opportunities of distinguishing themselves in the service of the Crown. The whole list of Baronets contains, I think, only one name of any native of a colony, and they are rigidly excluded from any higher rank. They are not made members of the Privy Council of the Empire, not admitted to the Order of the Bath, far less of the Garter. In lieu of these a great parade has been made of the remodelling for their especial benefit of a lower order—an order created originally for the reward of aliens who had served the Crown, that of *cavalieri* and companions of St. Michael and St. George, an order accordingly which we find stuffed with the names of Maltese and Corfiotes, and that must always retain the taint of an un-English origin. As if this was not enough, the order has been further degraded since its revival by the creation of a new order to which precedence over it has been assigned, that of the Star of India.

Nor are colonists admitted to the higher ranks in this order, which it is boasted was revived for their especial benefit. They are relegated to the lowest grade, that of *cavalieri* and companions, only three or four of the knights of the order being natives of any colony, and not one a Grand Cross. The second rank has, in fact, been reserved for Englishmen who have served the crown in connexion with the Colonies, and the order has been so much discredited in the eyes of loyal colonists by having, in some instances, been conferred on men whose efforts have been directed not to preserve but to break up the Empire, that it is understood to have been declined by not a few. Well might Rajah Brooke exclaim of such titles as these, that even the fiction that they are conferred by the sovereign can scarcely render them respectable.

A distinguished Nova Scotian, Mr. Haliburton, who has inherited his father's (Sam Slick) vein of satirical humour, comments felicitously on such anomalies in a paper entitled 'Pariahs of the Empire,' which lately appeared in the *St. James's Magazine.*[1] He says:—

'The order of St. Michael and St. George having been created for Greeks and Maltese, it was magnanimously resolved that distinguished colonists might be allowed to join their society. But the strain on imperial generosity proved too severe; the British Government could not resist the temptation to appropriate even these questionable honours to Englishmen, the Pariahs being reserved for the lowest order. Again, the

[1] See July No. 1874.

Home and Foreign Services, the Indian departments, the various offices in connection with the court and the government of the country, are closed against the millions of Englishmen who are born abroad. Nay, the very patronage of the Colonial Office has hitherto been reserved for Englishmen, although occasionally a colonist is sent to the West Coast of Africa to prepare him for another and a happier world.'

His father, Judge Haliburton, many years before had written :—

'The organisation is wrong; they are two peoples, not one. It should not be England and her Colonies, but they should be integral parts of one great whole, all counties of Great Britain. It should be no bar to a man's promotion, as it is now, that he lived beyond the seas, than living the other side of the Irish Channel. It should be our Navy, our Army, our Nation. That's a great word, but the English keep it to themselves, and colonists have no nationality, they have no place, no station, no rank. Colonists are the Pariahs of the Empire.'

The judge had the opportunity of stating these grievances in his place in the British House of Commons, but in vain; he had no following, and was not a power that any minister had need to propitiate. If, indeed, we seek the cause of such unequal treatment, we shall find it in the simple fact that the Colonies have had no representation in the Imperial Parliament, and so have not been able to make their just claims and rights respected by Governments based on parliamentary majorities. But is this a reason for the denial of justice and fair dealing? Listen to the warnings of Mr. Herman Merivale, uttered towards the close of a long and honourable career as permanent Under-Secretary of the Colonial Office.

Extract from 'Fraser's Magazine.'

COLONIAL DISTINCTIONS.

'Let philosophers deem of it as they may, the bestowal of public honours affords one of the noblest incentives to public virtue which the community has it in its power to furnish. And the feeling of possessing such honours in common would be specially conducive to that sense of national unity which we wish to foster. We seem, in my humble judgment, to have thrown this advantage, which was within our reach, deliberately away. We have created a colonial order of knighthood, as if to give express sanction to the doctrine attributed to us by the discontented, that Mother Country and Colonies are not to be classed together. Every honour which the crown can bestow

should be imperial, in my opinion, and open to every subject of the crown, in all its dominions peopled by Englishmen. And, in the next place, such honours as colonists do enjoy are only bestowed by the crown (in self-governing colonies), on the advice of the colonial Prime Minister, tendered through the Governor. It would be difficult to suggest any contrivance calculated to render them less valuable. The Prime Minister in a colonial democracy is the creature of the day. He is absolute for his time, but he knows that his time is short. He is nearly exempt from those national cares and interests to which the rulers of a great country are subject, and which create titles to public honour independent of party. His highest concern is to manage well the affairs entrusted to his charge; his lowest, but most ordinary and most engrossing, to keep his party together and to hold his place. And it is this last purpose, I am afraid, which he will have chiefly in view in distributing such honours as he can dispose of. I speak in the future tense, because the conferring colonial honours under responsible government is as yet too novel an experiment to admit of more positive commentary. But I can entertain little doubt that the machinery must work in the way I have anticipated. If I were to affirm broadly that the established usage under which the crown distributes honours under the advice of party leaders, at home as well as in the Colonies, deadens the public appreciation of these *chivalrous* rewards, gives them an ineffaceable stain of vulgarity, demoralises patriotic impulse, tends to lower even the standard of popular respect for the crown itself, I should doubtless be charged with gross exaggeration. But I should appeal to the judgment of such as will throw aside inveterate prepossessions and consider the question with impartial philosophy.'

Mr. Merivale again, in his work on Colonisation and Colonies, has recorded his opinion that it was owing to the want of a nobility and an Established Church that England found so little support in the day of revolution in her ancient Colonies. In this he did but confirm the opinion of Pitt, who declared that the absence of honours had accelerated the defection of our former Colonies. Burke and Wilberforce advocated the creation of hereditary titles in the Colonies as a means of preserving their attachment to us, and I believe that every statesman of that critical period of our history whose name is still held in honour amongst Englishmen was of the same opinion. But steps of this kind must be taken in time, before the crisis arrives, for when supineness and *laissez faire* have met with their natural result in discontent and disaffection, the creation

of dignities and bestowal of honours would come too late, for they would deservedly be rejected as a bribe. In this matter then, above all things, it behoves our statesmen to be wise in time. Judge Haliburton and his son, whom I have quoted, have a peculiar title to be heard, for they are descendants of United Empire loyalists, who abandoned their homes and all their fortunes in the States rather than relinquish their allegiance. But I might quote the Hon. Joseph Howe, a late Cabinet minister of Canada, W. Jardine Smith, of Melbourne, the late W. C. Wentworth, of New South Wales, and many other colonists, who have in vigorous and eloquent terms denounced the jealous and exclusive retention of all the highest honours by the parent state as ungenerous and un-English; and it may be well understood that what a few great writers and speakers have given utterance to rankles in the breasts of thousands, but that a certain proud fear of being supposed to covet such honours deters many from saying what is in their hearts. The moral effect of this exclusive system is degrading, for by not encouraging you do all that in you lies to discourage amongst colonists the higher aspirations and nobler sentiments, to discountenance everything but a snobbish and ignoble acquisitiveness as shown in the mere acquisition of material wealth. In so doing you incur a serious and heavy responsibility; you act practically on the maxim so coarsely expressed by a minister of Queen Anne in reply to a petition from the colonists of Virginia, praying that duly ordained clergy should be sent out to attend to the interests of their immortal souls. 'Oh, damn your souls; grow tobacco.' The political effect of this exclusive system is also full of danger, for our colonists must necessarily have their full share of ambitious men whose great aim in life is personal distinction; and that if these men, who are gifted with the qualities of leadership, are debarred from attaining the higher dignities of the Empire, they are certain to become disaffected and to advocate separation as giving them better chances of distinction. This year, 1874, sees the completion of a century since the ancient colonies of Britain were driven into rebellion and the renunciation of her flag. It is to be feared that the old cankerworm of jealousy of thriving colonies which caused that fatal disruption is still gnawing at the root of the parent tree.

Again, it is a matter of common remark that services military and civil rendered by colonists to their native colonies, are scarcely, if at all, recognised by the crown, which is the sole fountain of honour, although such services in being rendered to the possessions of the crown are rendered to the

crown itself. And again, though our great Colonies boast a strong Bar, which displays great forensic talents, and though legal ability of the highest order is constantly developed amongst colonists, it is complained that the judgments of Colonial Courts are not treated by the Supreme Courts in England with the respect due to them, and which is conspicuously accorded to those of the United States; and also that in matters of promotion the Colonial Bar is practically treated as distinct from and outside ours. There should clearly be but one Imperial Bar, and in this as in so many other respects all should be treated as 'but parts of one tremendous whole.'

Again, colonists are practically debarred from the great arena of employment which India affords. Why should they not be freely admitted to win honour and renown in that great field of enterprise? In fact the policy which has been pursued to the very verge of breaking up the Empire has been a policy of 'peaceful separation,' and in spite of all the official denials that we have heard of late, the evidence of this is perfectly conclusive. If, as we hope and believe, it is to be reversed, it must be strongly impressed on the Home Government, which dispenses the patronage and honours of the crown, that all who are born within the wide bounds of the Empire are alike Her Majesty's subjects and have equal claims to consideration; all distinctions must cease, just as distinctions between England, Scotland, and Ireland have ceased.

It has been the habit of some of our leading journals to talk of colonists as distinct from Englishmen, hardly entitled to the name, as persons with whom we have but slight ties and but few interests in common. But who are in reality these colonists, that they should be so flouted? They comprise the brothers and sisters, the cousins or nephews and nieces and sons-in-law of many of us. The growth of the Colonies has of late years been so rapid that probably a majority of their present inhabitants (which may be taken at about seven millions of white population) are natives of these islands. I have seen it computed that for every existing family in the old country one person has emigrated; and be it remembered that whilst the Irish betake themselves preferentially to the United States, the British go chiefly to our own Colonies. Speaking in this great commercial centre and metropolis of Scotland, a land whose hardy sons form the most successful of all colonists, I need hardly say that these Colonies offer the most promising career to the spirited and enterprising of every class and condition of society. I presume there is scarcely a family of

North Britain that either is not already or that does not hope to be thus linked to the Colonies, that does not look on them as the fairest heritage of younger sons. They naturally attract the most vigorous and energetic of our people, for they afford no career to the weak and timid, or indolent waiters on Providence, or hangers on on patronage and court influence. Those from among us whose adventurous spirit has led them to the less occupied parts of the national domain in pursuit of fortune, or of such a livelihood as our own crowded ranks deny them, remain to all intents and purposes British. They are men of like affections with ourselves, as much attached to all that we reverence and hold dear. *Cœlum non animum mutamus migrantes* is their motto, and being in all respects fully our equals, it is not to be expected that they should tolerate at our hands the patronising and supercilious air with which they are occasionally treated. Are they less highly educated than ourselves? On the contrary, their educational grants put ours to shame; common education is much more widely diffused in the Colonies than in England, as much so, I suppose, as in Scotland. There are several colonial colleges at which the standard for the degree is quite as high as at our Universities, whilst many of the wealthier colonial youths are now sent home to graduate at these latter. Colonial statesmen compare very favourably with our own ruling classes, and naturally so, for amongst them there is free and open competition, and happily none of that predominating family influence which in England limits the choice of Ministers to a few heaven-descended families.

Many colonial ministers could be named who have displayed the highest administrative ability and aptitude for government in ruling and reducing to order the *rudis indigestaque moles* of unbalanced democracies which we have so kindly handed over to them. Hence the striking fact that throughout the wide domain of our Empire there reigns profound peace and order, whilst all is turbulence without. Again, in most colonial communities there is observable a more manly and self-reliant tone of public opinion than with us. Such outbreaks of ruffianism as shock us here, in every paper we take up, displayed in outrages on defenceless women and old people, committed almost with impunity, would not be tolerated in any colony with which I am acquainted. They would be sternly repressed, and accordingly are never heard of. In loyalty, again, and attachment to the Throne, and to British institutions, the Colonies have often shown that they are quite on a level with us. I have dwelt on this part of my subject at the greater length, because nothing is more certain than that a

union, to be lasting, must be based on mutual respect. The Colonies amply pay their tribute of respect to us in the admiration of our greatness and power, and I claim for them the tribute of respect due to their enterprise and independence of character.

I say that any misconception on this head arises from the shameful ignorance which prevails amongst us of the history and condition and prospects of a colonial empire which should justly be a matter of so much pride to us. It should be a part of the ordinary school course, and a leading subject in all examinations for the service of the State. The Colonies have everything to gain by becoming better known. That they enormously augment the commerce, and thereby the wealth and power of this country, has been abundantly proved by statistics as to the truth of which anyone may readily satisfy himself. (For reference on this subject, see Mr. Archibald Hamilton's paper on 'Our Colonies,' read before and published by the Statistical Society, and my 'Tables of British Commerce.') These show that colonists become larger consumers of our manufactures by emigrating, and so bettering themselves, than they could have been if they had remained here. They take our wares, and at the same time cease to consume our store. The very last financial year has signally confirmed the conclusions which Mr. Hamilton and I arrived at, quite independently of each other, in these researches, for it has shown that whilst our exports to Europe and the United States, and the whole world outside the British world, have declined by no less than seven millions, or 3·5 per cent., those to our own possessions have in the same time increased by nearly six millions, or 9·5 per cent. Therefore it is clear that our whole trade would have alarmingly collapsed if new worlds had not been discovered in our Colonies to redress the balance of the old. These facts were brought prominently before the world in a leading article in the *Times* of August 17th last, a paper which cannot be accused of any too partial bias towards the preservation of the connection with our Colonies. My tables have shown (I think to demonstration, their deductions never to my knowledge having been controverted), that when colonies have transferred their allegiance or become independent States, as in the case of the United States, their trade ceases to be preferentially with the parent State, and as far as commercial intercourse is concerned, they become precisely as foreign countries.

Bearing these facts in mind, we cannot be surprised that our colonists should ask indignantly, as they are asking, why

they should be looked on with coldness, and treated as they think they are treated in so many ways, as branches of the family of less dignity, and deserving of less consideration than ourselves. I entirely believe that such instances of supercilious treatment are no longer designed, but are the relics of bygone corrupt administration which cared only for the Colonies as a field for patronage and pensions, and of more recent, but now exploded political doctrines aiming at the formation of a number of independent Anglo-Saxon communities throughout the world.

But, whatever be the cause, all distinctions of this kind are unwarrantable, and in the worst possible taste, because founded on false assumptions, therefore pretentious and snobbish. They are, however, directly encouraged by the State, as long as colonists are deterred or discouraged from entering the service of the crown in a military or civil capacity; and in this respect matters have become much worse since the general withdrawal of the troops from the Colonies. Whilst our army was quartered throughout the Empire, there was the constant incentive to young colonists to enter it, and great encouragement was held out to them to do so by the grant of commissions on the recommendation of the Governor, as the Queen's representative. Now I fear it is different, and that very few colonists enter our army, and still fewer the navy. It may so easily be understood how strong a bond of union brotherhood in the same honourable services must be that it is not worth descanting on. The materials for the recruiting of our services in the Colonies are magnificent, and a few figures will indicate them. Canada is now the third naval power in the world, possessing more than a million tons of shipping, and having beaten France hopelessly in the race.

She has an active militia of 45,000 men under the direct command of the Queen, representing the pick of her 3,756,000 people, and commanded and officered by regularly trained officers, besides a reserve militia of 700,000, and excellent military schools. Here is a formidable power to enlist on our side, or to alienate and array against us. The other large Colonies boast of militia in proportion to their populations, and of well organised and most creditable volunteer corps.

The development of the militia and volunteer forces in our Colonies may be judged from the list of officers who form the permanent staff, as given in our Army List; for these now number 4,772 (besides 155 retired, but still kept on the books).

The Australian Colonies, and New Zealand also, have a large and increasing marine, and one of them, Victoria, maintains three ships of war. But will it be credited?—these ships

are refused admission to our Navy List, and are only allowed the use of our flag with a distinctive badge. Could any stronger instance be imagined of the alienation policy to which I have had occasion to refer?

In like manner the colonial military forces have only been admitted within the last year or two to the body of our Army List, and that after a struggle on the part of the colonial party in England which is amusing to think of; but there at length they are, and I look on their insertion as an augury of improved relations in the future.

There should be but one imperial army and one navy, and if it be said that it would be difficult to get the Colonies to join the Mother Country in forming these, the assertion only argues ignorance of the Colonies and of their habits of thought. Proposals of this kind abruptly made by a Cabinet, or brought forward in our Houses of Parliament in an exacting and offensive manner, would probably insure their own rejection, and prove as hazardous as the attempt to tax the tea in Boston harbour; but if submitted to the Colonies prudently, tentatively, and with ordinary tact, *i.e.*, in a statesmanlike manner, offering them the enrolment of a certain quota from each, as Imperial regiments and ships, they could not fail of success. And what a grand power for good and for the maintenance of the harmony and tranquillity of the world, and the promotion of the cause of human civilisation and progress, would the British Empire then become! Shall it rise to this height of grandeur, or sink, as other empires have sunk, to be a thing for contempt—'a fixed figure for the hand of scorn to point her slow, unmoving finger at?'

The present period of profound tranquillity is clearly the time for organising the defences of the Empire on a sensible footing. *In pace para bellum.* It is true that colonists have of late been assured that the honour of this country would oblige it to expend its last shilling in their defence; but they hold such stilted and exaggerated language, in the absence of any preparation to justify it, for what it is worth, or rather resent it for its patronising tone, and, in fact, the natural effect of language of this kind (if it have any) must be to alarm the English tax-payer at the extent of his liabilities, and make him anxious to reduce them by getting rid of the Colonies. The whole tone of British colonisation is that of a somewhat arrogant self-reliance, and in this matter of defence they have shown no reluctance, but the utmost readiness, to equip and organise their local defences—conspicuously so, when, in 1870, they had reason to apprehend that we should be dragged into the Eu-

ropean war; but they look, though hitherto in vain, for some scheme of common defence to be put before them by the Home Government, where alone such a scheme can originate. As yet, the Home Government has revealed no scheme of policy in the matter; no preparations are making for organising the forces of the Empire, and all appears to be left to the haphazard of the next war.

But this question of federal naval and military forces opens the large one of the representation of the Colonies in the councils of the nation. That they cannot be represented in our House of Commons I hold to be so clear as not to be worth arguing; but surely there are other modes than this.

A well-known 'Old Colonist,' writing in *Fraser's Magazine*, in December, 1872, says: 'Colonists have never shown any symptoms of shrinking from the responsibilities which rightly fall on them. If they were represented in the Imperial councils, it would naturally follow that they should pay their quota to Imperial institutions;' whilst, on the other hand, if they are persistently denied all concern in the management of the external affairs of the Empire, they will certainly some day demur (as they have already demurred in Australia) to being bound by conditions, or committed by acts, to which they are no parties, and concerning which they were never consulted.

Mr. W. Jardine Smith, of Melbourne, and other colonial writers, have advocated the formation of a Supreme Council of the Empire, for the consideration of the external affairs, and others in which the whole Empire is interested; and this project of a council, rather than of a united parliament, is clearly the favourite idea of colonists. It is one which is greatly favoured and facilitated by the appointment of agents-general in London to represent all the larger colonies, and these are in some instances surrounded by a court of advisers similar to the India Council. This plan is evidently taking root, and expanding and growing with the healthy growth of all English institutions which experience shows to be congenial and useful.

In furtherance of this project of a Supreme Council, I some time ago submitted to an assembly of colonists a scheme which was received with a certain amount of favour, though it was acknowledged to be hopeless to put it before the Government of the day. Of this I will, with your leave, in conclusion, reproduce the heads. It is one that has received the approval of so profound a student of constitutional history as Mr. Froude, who wrote on it as follows:—

'The machinery of the Privy Council is, as you say, made to the hand for a judicious reconstruction of our colonial relations.'

My proposal was not to attempt to create *de novo* a power unknown to the constitution that we all revere, but still planting our footsteps on her ancient and well trodden paths, to take advantage of the machinery provided by that venerable institution, 'the Queen's most honourable Privy Council,' by reviving in a manner suited to the present and prospective exigencies of our colonies, that department of it which was formed under the name of the Committee of Privy Council for Trade and Foreign Plantations, and so constituting a branch of the council for advice on the general concerns of the whole Empire, in like manner as the Judicial Committee of the council is constituted as the Court of Final Appeal on legal matters. I showed that the Cabinet, whose only leading status is that it consists wholly of privy councillors, and is, in fact, a committee of that body, may be regarded as the standing committee for general purposes, and is supposed to represent the prevailing public opinion of the kingdom for the time being; that it is necessarily in harmony with the House of Commons, but with that only; and that an analogous Committee for counsel and advice, in which the Colonies as well as the Mother Country should be represented, would apparently provide the whole machinery necessary for the government of the Empire. Each division of the Empire and each great self-governing colony or group, should be represented in it in proportion to its numbers; hence the British representatives would for the present be four or five times as numerous as those of all the colonies together, but this proportion would vary *pari passu* with the more rapid growth of the younger portions of the Empire.

The agents-general of the Colonies would naturally be the chosen representatives of each.

All who are once made members of the Privy Council are members for life, but those only can attend its meetings who are summoned; therefore the Colonies might change their representatives as often as they pleased, though the appointment would confer a certain dignity for life. The sphere of this Committee would be confined to advice on a few simple but grand subjects. Peace, war, diplomacy; the marshalling of the forces in time of war, the proper quota or contingent of forces to be furnished by each colony for imperial purposes, and the distribution of the imperial garrisons and ships.

Holding as I do that a legislative union of the Empire is at present impossible, I yet believe that a federal union is quite practicable, and may be accomplished without difficulty by the formation of a federal council such as I have indicated.

On the Same. By EDWIN CHADWICK, C.B.

ON this great question, propounded for discussion in the Department of Economy and Trade, I have to submit some principles of political economy, which I have helped to develop, in connection with recent inquiries made under the auspices of the Council of the Society of Arts, Manufactures, and Commerce, of which I have the honour to be a Vice-President.

I have heard from a former Chief Secretary of the Colonial Department, and from others in high position, avowals that the policy on which they were disposed to act, as the right policy, was a policy of 'weaning' our colonies from the mother country. I have heard such avowals with regret, but, as a political economist, without surprise, and I advert to them as illustrative of the great suggestion by the noble Earl, our President, of the expediency of technical education for statesmanship, especially, of course, of education in the elementary principles of political economy, which until recently have been entirely omitted in superior education. For to one conversant with the economy of the subject this policy of weaning the colonies would be found to mean, weaning us from the greatest of our means of progress in arts, manufactures, and commerce—weaning us from powerful conditions of demand for production, for labour, and for the increase of wages—weaning us from the best means of relief from congested labour markets—weaning us from the means of augmenting revenue—weaning also the colonies from the most extended markets of the empire—from the cheapest means of their national defence, and from the accepted centre of their economical and social, as well as of their political progress. Overlooking these elements of economy, having no conception of any substantive element of dominion other than military force, and that being evidently ineligible—having no conception of the economic force of mutual interests as binders of dominion, the feeling of those right hon. gentlemen, as regards the colonies, has been to 'let them go.'

Now I beg to submit for consideration one primary economical element to be taken into account as of constant and unceasing beneficent action—the element of what I call 'intercolonial goodwills.' I may illustrate this goodwill principle and its primary economic value thus:—I may call myself in political phrase 'a dependency' of my baker, my butcher, or

other of my tradesmen. To anyone of these my habit of dealing with him, in preference to others—though I am perfectly free to deal elsewhere—is to him, with the same habit of his other customers collectively, a habit of saleable value at several years' purchase of his future annual profits, such value being known as 'a goodwill'—which includes his cost of forming and maintaining his business connection. You may see such 'goodwills,' large and small, constantly advertised for sale as properties. On a large scale, manufactories and businesses are frequently sold for the formation of joint-stock companies, at such sums as twenty and fifty thousand pounds, and in one instance of which I have heard of upwards of two hundred thousand pounds for the goodwill alone. Now, all our commerce with India, or with our colonies, will be through established commercial houses. Each of those houses will have formed connections and established commercial habits of dealing with customers in India or the colonies—habits of dealing, constituting 'goodwills' or saleable properties. All the commercial houses in India or the colonies are now perfectly free, if they be so minded, to deal with any foreign house, but the habit of dealing with the British house, *cæteris paribus*, is to that British house a habit of money value for which some years' purchase would be asked and given. The whole colonial and Indian commerce passing collectively through such houses constitutes what I call our 'intercolonial goodwill,' or, as regards India, it might be called 'intra-imperial goodwill.' If the commerce of the Mauritius, of which we have retained dominion, be compared with the commerce of Bourbon, of which our Government gave up the dominion, and therewith much of the habit and the trading connection, I expect that the difference in the money value of the commerce to us and of the 'goodwills' will be found to be considerable, as it would be on a comparison of our commercial relation with Java and Ceylon. If the Cape had remained with Holland, its commercial progress would no doubt have been chiefly Dutch, instead of being, as it now is, largely and increasingly British. This view admits of extended illustration by comparisons of our commerce with the colonies of other nationalities and our own. No sound political economist on looking at the facts will doubt that in the annexing of the Fiji Islands ourselves, instead of leaving them to any other nationality, we annex a greater future amount of commerce from them.

The goodwill principle, it need scarcely be stated, is of mutual operation, though from older establishments its develop-

ment is the strongest in the mother country, whilst from the more recent commercial formations and conditions of quick change, it is the weakest and most in need of nurture in the colonies.

All that I have stated is known in commerce, though, from defective education, it has been hitherto unknown in political circles. It will appear that the statesmen who were not economists knew not what they were doing, either for several islands or for their own country, when they gave them away as a profitless trouble—as they probably were to them—men saturated with wealth, scarcely knowing how to administer their own, and above the consideration of how to get it for the many. If a valuation of the purchase of the goodwills of the commercial Indian and Colonial houses were made, with a view to a transferrence to the houses of some other nationality, it may be confidently anticipated that the total amount of the value claimed and justified for compensation would be an immense surprise to Downing Street. It would, I expect, be found that the commerce of regular imports and exports must for the greater proportion be made up of goodwills—that is to say, the greater proportion of the commerce in imports and exports to the Custom-house, declared value of 650,000,000*l.* per annum—for which goodwills, the price of the aggregate at three years' purchase (with all incident deductions) would be of a gigantic amount, utterly astounding to those who are unaware of the economical principle.

The instance of our commerce with the United States might appear to militate against the doctrine of international goodwills; but, when fairly examined, I believe it will be found to confirm it. The strong habits of race and of home connections, constantly sustained and increased by a powerful and an increasing emigration from the mother country, have to a great extent maintained social ties and have overborne the economical consequences of the political severance. But, large as that commerce now is, it may be confidently stated that, but for the political severance, it would have been yet larger, safer, and in greatly increasing proportions. The political severance will indeed be found to have been economically the most detrimental to our kinsmen in the States, for it has subjected them to exclusions from settlements and to restricted intercourse with the wide colonial markets under the British dominion; it has weakened beneficent social influences which, in the interests of civilisation, should have been maintained and fostered; and it has excluded them from a common citizenship of an Empire on which the sun never sets. The Canadians,

as fellow-citizens of the Empire, have freer access to the home markets, and are more free to establish branch houses, to form connections with all the colonies of the great Empire of the mother country; and, it may be added, that they enjoy a free participation of a consular and diplomatic service, and naval protection all over the world. With the like privilege the goodwills of the United States, I anticipate, would now have been of higher value than they are. If economical considerations be regarded, separation from the mother country would be found by the Dominion to be separation from a large future of commercial profit and interest—apart from the severance from sympathies and moral and political interests, which have a distinct value. On the main question, propounded by our lamented colleague, the late Secretary of the Colonial Institute, 'By what means may the interests of the colonies of India and of the mother country be best drawn together?' the answer I have to submit is—By strengthening these goodwills, by cheapening and by hastening the transit of goods, of persons, and of information.

Let it be considered how this may be done. In the time of Adam Smith steam and electricity may be said to have been unapplied. There were no railways, no steamships, no postal telegraphs, nor had our earlier political economists before them the great facts displaying the vast importance in the production and distribution of cheap and quick means of transit, of produce, and of persons, for the creation of international interests. They could not have dreamed of an advance of physical science by which our bodies might be conveyed by steam at fifty miles an hour, or nearly a mile in *a minute*—our thoughts and utterances might be conveyed at a rate of one hundred and eighty thousand miles, a distance more than seven times round the world, in *a second*. About forty years ago, the time of the transit of goods round the Cape to India was four or five months, and the cost for the first-class passenger about 120*l.*, for the second about 60*l.*, and the third about 30*l.* A letter was considered to have been duly answered if it were answered within a year. I perfectly well remember that an administrative appeal from India to the Court of Directors was held to have been dealt with in due course if it were despatched in fifteen months. By steam through the Suez Canal the time in the transit of passengers and of goods is reduced to less than one month, and the cost by the Peninsular and Oriental Company, for the first-class passenger, to 65*l.*; for the second, to 35*l.*; and for the third, to 18*l.* The reduction of the cost of transit of

goods has been proportionate. The saving in the cost of time in the transit of persons is displayed in the transit for military and civil service by the reduction from eight months' pay to a month's pay in the passage, besides the reduced costs of the passage money. The time saved in transit constitutes a large proportion of the time given in furloughs for recruiting health and strength, and also for the transit of force. It is an example of the deplorable conditions of the want of economical principle, from defects of education in economical science in high political circles, when but recently the cutting of the Suez Canal was proposed and supported by one Government and from year to year thwarted and obstructed by another Government—that of this commercial nation—as being an injury to England. 'It would,' said the Imperial politicians of the Tuileries, 'give to France the lead in the commerce of the East; it would pierce the shield of England.' 'Deplorably too true,' responded Downing Street. 'How can the sad work be prevented?' Look at the extent of verification of the uselessly forewarned economical results. Of 1,173 vessels which passed through the canal last year 812 were British, and only 83 French and 37 Dutch. Of the tonnage 72·3 per cent. was British, and only 9·5 French, 3·59 Dutch! The political ignorance, from the defect of superior technical education, occasioned the delay for years of all the fourfold 'turnover,' as compared with the Cape, of the capital now passing through the canal, at the rate of seventy millions annually in ships and cargoes. To exemplify the saving in distance and time, I may state that the total insurable expenses of an average 2,000 ton vessel of the class passing through the canal would be about 200*l.* per diem, or 6,000*l.* per month, of which three out of four months are saved by the cutting of the canal. There are free traders who regard the repeal of import duties as the end of all free trade, and who take no account of the burdens on trade of transit duties which are yet greater. Thus, on a cargo of sugar, the import duties now repealed would have been 5,000*l.*—a relief only of one-third that obtained by reducing distance, and not more than that obtained by speeding the business a month by telegraph. The combined result of the canal in speeding the transit of goods and persons has been to bring India in time as near to England as Constantinople was at the beginning of the present century, or as Rome was at the beginning of the last century; but the rule of engineering and mechanical science will, it is promised, further reduce the time by one-half; and so to a greater or less extent of from one-third to one-half with all our colonies.

Mr. Reed's principle of construction promises, for the Bessemer steam passenger ships, an augmentation of the average speed by one-third, or to twenty miles an hour punctually in all weathers. We may say, too, that by improved asphalte tramways, at a third the cost of iron tramways, branches to railways may be made to be feeders instead of suckers, and that for all transit of goods and passengers by common vehicles the cost of horse-power may be reduced more than one-half. We say further, that by the application of economical science and unity of administration, and by the use of cheap public capital in the place of dear private capital, the cost of internal transit for passengers and goods by railway may yet be reduced by one-third or even to one-half, as in Belgium.

I now beg to submit to more and special consideration some distinct economic elements involved in speeding and cheapening the transit of information.

At the beginning of the century the transit of information from Australia by return letter was one year. It is now, by electric telegraph, accomplished in a day. The Peninsular and Oriental Steam Company may, it is stated, convey a letter from London to Melbourne or Sydney in something under two months, and an answer to that letter can hardly be received in London in less than five months. Meanwhile the state of the markets may have wholly changed, so that the merchants may be wholly thrown out of their calculations, and transactions are rendered dangerous. Now the response may be given possibly within the same day. But the speeded information is of the greatest importance for regulation of food supplies. Formerly on the failure of a crop it took as much time to learn by letter the conditions of distant crops as sources of relief that high prices and scarcities were on the population before those distant supplies could be ascertained and secured. Time may be said to be abolished, fields of food supply extended, and prices kept steady or reduced. By the ocean telegraph the Australian merchant and the London merchant, the Californian cornfactor or grower and the Mark-lane cornfactor, are brought almost as near to each other as if the one were at the Royal Exchange, London, and the other were at Westminster. It is now a matter of practice that merchandise is bought in Calcutta and sold in London on the same day, as readily as if Calcutta were where the London Docks now are, and the sale were made in the Royal Exchange in the City. Even transmission by electricity may, however, yet be further speeded—at least as to the number of messages that may be transmitted over the same wire within

the same day. But this most important question—of the highest economical and commercial importance for saving stocks and saving the interest on capital by speeding operations—is as to the extent to which electric telegraph communication admits of being extended and cheapened. Electrical science may be said to have provided for the commerce, the affairs and interests of the world a new system of nerves of sensation and volition. Economical science would confer the benefits of this time-saving and interest-creating gift to the many, but ignorant, uneconomical administration has encumbered it, has augmented its charges and restricted its action, narrowed our markets, and has confined its benefits to the few at least in this country. Here the internal postal telegraph charge, though reduced, confines the use of the telegraph to professional men, and to a few of the higher and middle class. It is very little used at all by the great agricultural class, and not at all by the wage classes. But in Switzerland and Belgium half-franc messages extend the benefits to all of the middle class and to the artisan class for speeding their daily operations, and it does so with a good surplus revenue—which, however, we deem a very secondary consideration. But in respect to our immediate subject of intercolonial interests and goodwills, the high charges of ocean cable messages, owing to errors in political economy, restrict the regular use of telegraphic communication to a few great houses, and confine even those few great houses to wholesale transactions, and for those transactions to painfully restricted messages, which are often puzzling and dangerous enigmas. The necessities of commerce are compelling correspondence more and more by telegraph and less and less by letter, and are making the existing conditions more and more burthensome and grievous to the few who regularly use it, inducing the special employment of skilled clerks and decipherers. The charges are prohibitory of the use of the time-saving gift for the great mass of small houses and for their smaller transactions. They are, above all, prohibitory of social messages from emigrants, travellers, and colonists. They deprive the emigrant and the belated traveller of remittances of small sums from home, needful to speed his progress. The social messages from India do not amount to much more than one per cent., and the proportion is not much greater from Canada, being confined indeed to extraordinary events and messages for the few who can afford to pay for them.

Nevertheless, let us consider what we find to be the economical working of the service, even so far as it has yet been

arried. The first operation is, in saving capital, in saving tocks, by enabling dealers to telegraph for goods as they are ranted. To meet sudden demands, the provincial retail rocer telegraphs to the wholesale dealer in the metropolis; he wholesale dealer telegraphs for supplies to the importer t Liverpool or Glasgow; and the importer again telegraphs o the producer—the planter in the West Indies. The supply s the more closely adjusted to the demand, and gluts of produce are avoided. By these means business is conducted in various lines with one-third the capital formerly necessary. But the further effect is to speed the 'turnover' of capitals by two or three fold within the same time. The effect, as I have stated, of speeding the transit of goods by the working of the Suez Canal and of the telegraph in speeding transactions, has been a fourfold turnover as compared with the transit round the Cape. The interest on the cost of the canal appears to be less than 2 per cent. on the estimated turnover of the British capital passing through it, so that probably it would have been worth while for this country to have cut the canal at its own charge, and have bestowed the freedom of it on France to do the best with it she could. This fourfold 'turnover'—and all 'turnovers'—be it noted, include the 'turnovers' of large proportions of duty-paying produce. Wonderment is expressed by some statesmen, who are not political economists, at the 'rebounds' of revenue, often ascribed by those honourable gentlemen to measures which can have had little or nothing to do with the real actuating cause. As a rule, every inland business telegram saves a day of time or speeds a transaction by a day, and every business ocean telegram speeds a considerable transaction, or set of transactions, by weeks and by months, and saves weeks and months of interest on large capital, saves weeks and months of establishment charges, and often saves weeks and months of deterioration of agricultural and of perishable produce. How little is known of the practical operation of economical principles in these respects is shown by the fact of the recent absence of surplus, or the assumed deficit of revenue from the inland postal telegraph being bewailed as a severe and absolute loss—as if a surplus of revenue were the sole test of gain in the operations, any more than in such instances (which I might multiply) of new means of transit which yield nothing directly in rates or tolls—but which otherwise yield great returns—as in the instance of the Suez Canal. I believe, however, it will appear on examination, if one member (Mr. Reed, the Member for Pembroke) obtains the committee of which he has given notice, that the apparent deficit on

the inland telegraphs, which is temporary, has been in great part occasioned by an economical blunder in the extension of an unnecessary monopoly, and giving rise to immense claims for several millions of compensation by the railway companies, and also by a financial error by the Treasury improperly charging to revenue extension works, which commerce would have charged to capital. That however which the nation has real cause to bewail, as it has had to pay 8,000,000*l.* and more for it, and to pay shilling instead of sixpenny messages, which we should have had years ago, is the ignorance of political economy which allowed the charges for multiplied establishments on dear capital to grow up, despite of indoor representations, despite the outdoor representations, until upwards of 10,000,000*l.*, chiefly for multiplied establishments and trading interests which ought never to have been fostered,—had to be paid for what might have been at first got for two. Each of half a dozen of changing political chiefs must, by his want of the economical knowledge befitting his position, have occasioned to the public a loss of nearly a million of money during his period of service. It is estimated that two-thirds of the inland telegrams are on business messages, and that the saving of interest of capital, or of the value of the business time, is estimated to be upwards of 10*s.* per telegram. When the inland service was taken over from the private trading companies the rate of service was about 6,000,000 of telegrams per annum, and it was increasing very little. It is now upwards of 20,000,000, and is increasing very much. So that in the lowest estimate of gain as to the two-thirds of business messages—and despite the inflated charges to which economical ignorance has subjected the public—there has been a real public gain of several millions above any deficit of revenue, even had the telegraph service been rendered gratis. It is to be kept in mind that a proportion of the wonderful rebound of the revenue may be demonstrated to be created by the increasing turnover of duty-paying commodities from their being telegraphed for as they are wanted. In the present condition of the inland postal telegraphs, whilst the central department at St Martin's-le-Grand is from defects in arrangements (of which there was time for preparation) declared to be working up to their full power, we may show that the local offices are, for the greater proportion working greatly below their power, and in need of further occupation. Proceeding upon a long-practised plan, we adopt the system of France and of the North of Germany of telegraphic zones. In France there are half-franc messages

for zones of departments, and franc messages for all beyond them. Why should not sixpenny telegrams be adopted for Glasgow, which once had them—and, indeed, for all Scotland, as for all Switzerland or Belgium? It must be observed, however, in answer to those who object to any change in the trading system, that 'the Government does everything badly,' that here we have an example of which we say that it has done and is doing this work badly, as compared with the Governments of Belgium and Switzerland, yet that this public postal telegraph administration at its worst is demonstrated by the statistical returns to be already more than threefold better than that of the private trading directories at their best, when they declared that it could not be surpassed. Why, however, should the mercantile service of Glasgow and other commercial centres be kept back, and the restoration of a surplus be delayed for years, on account of the gorged condition of St. Martin's-le-Grand? We dispute, upon the precedent recited of France and Germany, and, indeed, of home experience, the principle of a uniform sixpenny rate as of absolute necessity for all the United Kingdom of Great Britain and Ireland.

Looking at the increasing conditions of competition on all sides, it follows that every stimulus should be immediately applied to restore and animate our commerce, and experience shows that cheap telegraphy is a most powerful stimulus, especially cheap ocean telegraphy, to bring in retail business and extend branches required to bring in new islands. At present, the practice of merchants is, on account of the expense, to direct their captains not to telegraph home until they reach the port of final destination. With cheap ocean telegraphy, captains would telegraph information from every port at which they touch, and send retail orders and receive instructions; and merchants sitting in their offices at home here at Glasgow or elsewhere might exercise their own discretion in conducting their ventures round the world—an immense advantage for the guidance and maintenance of our mercantile marine. Now, we affirm it to be a rigid economical condition that the service of private telegraph companies (and this principle applies to railway transit) must be dear and comparatively restrictive, whilst ocean postal telegraphy on a public footing may be cheap and widely expansive. The economic law governing this and the like cases, of the uses of cheap capital, obtainable by public security for the public service, is as yet very little understood in public offices or in Parliament. The pupils in the secondary

schools, where political economy is taught, at Mr. William Ellis's Schools, and the Jews' School, under Mr. Moses Angel, may be looked to for its proper application. I offer some illustrations of it on this question. The private companies for this riskful service can only work with dear capital, usually to 10 per cent. On a public footing the service may be conducted on the cheap public telegraph capital on public security, raised for the public service, at $3\frac{1}{4}$ per cent. Private companies cannot form branches except on dear capital, and on a prospect of working them at a profit upon that dear capital—usually 8 to 10 per cent.—as also upon separate offices and establishments, charged usually upon small traffic. On a public footing branches may be formed with cheap capital, and may be worked with the existing postal establishments at the cost of the service, and at some points may be worked with public profit at even less than the cost of the service, just as the penny post is at some points. The practical working of the principle in question, of cheap public security as against dear private security, is displayed on this ocean telegraph question in conclusions stated by Sir James Anderson, the Manager of the Eastern Telegraph Company, which I have appended. One of these conclusions is that all reductions of telegraph rates for a time reduce receipts, which a private company cannot do or will not do, but a government can and ought. Of this a prominent example is presented by the result of the inland postal telegraph. No private company could have undertaken the loss of revenue which was undertaken by the post with the immense gain to the commerce, which I have stated.

The question of the extension of branch ocean lines is of the highest importance for the service of remote rising settlements, and also for the economy and the prompt efficient direction of war force for their protection. The Cape Coast is about a thousand miles from the nearest ocean telegraph station for information and action. If there had been a branch line to Sierra Leone or to the Cape Coast, we know that the Ashantee war might have been nipped in the bud. The known power of promptly bringing up a reserve force is in itself a great means of prevention and of economy of protection. It really appears to me that the economy of our dominion to India, to the Indian, and the gain by extended means of speedy intercommunication, has yet to be understood and considered. If India was left to the Indians, as has been talked of, it would not be left to the bulk of the Indians, but to numerous savage and other expensive dominations of independent forces. By a quarter of a million of force, or by about seventy thousand of British force, we cer-

ainly save the Indians from the burthen of some three millions f native forces and their ravaging wars. It is an economical eat and a great glory that with less than ten thousand of Brisish force we give security to the producers of sixty-three nillions of population of Bengal—a population equal to that of he Empire of all the Russias. Great Britain holds all India n peace with a force no greater than that with which France has hitherto held Algeria. But to the end in view, with the increasing learness of our home labour market and the increasing difficulties of enlistment, every means of economising and quickly concentrating force and supplies by improved means for its transit, by improved roads and by speeded information, becomes of increasing public necessity and economy. Of what value in the movement of force would information in a day or an hour, instead of a three weeks' overland journey, have been on the occurrence of the Indian mutiny? By a completed system of ocean telegraphs, branch and mains, a power is gained of concentrating all war ships, with crews, now made by discipline floating regiments for land service, on such occasions. And yet the functionaries of the India Office for aught that appears are in a state of torpor on the subject, from which the residents in India ought for their own security to arouse them. Added to such needs are the needs of speeding relief on the occasions of calamity of famine, as has been exhibited during the recent famine in Bengal. Great as were the benefits derived from the improved means of transit of information and of produce there, we know there would have been yet greater had there been branch lines of ocean telegraph to the Mauritius and to other markets of speeding food supplies. The Navy Department, as well as the War Department and the mercantile marine, might be expected to be anxious and urgent on this question.

I now come more directly to the economics, or to the income derivable for public acquisition and extension of the system of ocean telegraphs.

Unfortunately it is the common course of Governments that the changing political chiefs who are appointed to offices requiring special aptitudes and undivided attention, enter them under conditions in which they can only give divided and distracted attention, and usually leave it before they can have learned its duties, those especially who, as in the instance cited, have not had the light of science or of master economic principle for their guidance. Hence they are mainly dependent for any advance in administrative improvement on the advice of 'insiders,' or permanent officers, who are miserably destitute of initiative, averse and obstructive to it,—whose own know-

ledge is very much bounded by the four walls of their offices, and by their own daily routine within them. If it be a question of finance, it may be, or at least would have been hitherto, at the dictation of the insider, whose reputed specialty has been to say 'No' to anything new, and to economise the means of economy on the largest scale. Or if it be on the germane question of administration it may be dependent on that overworried, overwearied 'insider,' who is in need of relief from the muddle made of his present work, and who in regard to any new work, if anything must be done, thinks 'how not to do it' for years to come—during all which time waste must go on as it has gone on. The cramped education of most insiders will generally have excluded them from the knowledge of sound economical principles, and amongst those principles the one immediately applicable, *i.e.* the law of increasing rates of consumption with diminishing scales of prices in different classes of the community, a law which the student in statesmanship may find indicated in the fourth chapter of Say's 'Political Economy.' Indeed, in a paper I wrote in 1832 I endeavoured to develop that economic law when I showed that if in any time or place, composed of the average relative associations of society, there are found one hundred persons who can spare a shilling for a work or a service, there will be found more than three hundred to spare a sixpence, more than a thousand able or disposed to spare threepence, and so on. The official inside ignorance of this economic law was exemplified in this department on the occasion of Sir Rowland Hill's proposal of the penny letter post. The inside positive declaration of the department was that if letters were even carried gratis their numbers would not be doubled. Their numbers have been increased ninefold. Much of this increase has been ascribed to the working of the railways; but in the metropolitan twopenny post district, with which railway postal transit has had nothing to do, the increase from a reduction from twopence only to a penny has been more than sevenfold. Now, the Society of Arts has been at the pains to obtain the requisite outside information from existing users of the telegraph in commerce, and they declare that where they now use one postal telegram at a shilling they would use three or four or more at sixpence; and furthermore there is the great mass to be brought in who do not now use telegrams, but who would constantly use them if they were cheaper. From merchants and shipowners (of the very few who now use the ocean telegraph) declarations have been received that at one-fourth the existing rates they would spend a great deal more than they now do. Added to these few are the many who

are now prohibited from using them. There is a great lower stratum to be 'tapped,' including emigrants and settlers needing social communication, to whom the existing charges are prohibitory. On the terms of the acquisition, if the inland telegraph question had been properly managed, the State would, by an annual expenditure of about 220,000*l.*, raised at 3¼ per cent., have been put in possession of a business then producing some 350,000*l.*—the then estimated purchase-money being about seven millions. But springing charges, occasioned by a want of sound economical knowledge on the need of a monopoly of from three millions more than was at first estimated, have swept away the anticipated immediate surplus. We shall be able to show, however, that in the instance of the great ocean telegraph companies, all of whose messages pass through the Post-office, so that every shilling of their income may be ascertained beyond dispute, no such question need arise. The terms of purchase for which we may contend in the interest of the shareholders, to whom we would make the offer individually, would be the grant of public security for the average of existing dividends. This public security, which would cost the general public nothing, would give the shareholders an important augmentation of the saleable value of their property, covering the recognised fair terms of compulsory purchase. And this security we have had assurance of large shareholders they would be willing to accept. By these means, with capital raised at 3¼ per cent., the public, we are assured, may, for an annual expenditure of 520,000*l.*, acquire a business now producing nearly 1,200,000*l.* per annum. We may adduce the evidence of men of eminence in large commercial operations to show that the whole of the recited great advantages may be obtained without the State laying out or practically risking one shilling. Of the defective economical education prevalent we may give examples in Right Honourable gentlemen, members of the Cobden Club, who appear to be unaware of the economy of unity; who do not seem to know the difference between competition 'for the field,' as I have termed it, which sustains unity, and competition within the field, which produces disunity and dearness;—who are unimpressed with the effect of this common species of competition as between water companies and gas companies and railways, pursued at the expense of ignorant shareholders, and which ends in compromises at the expense of the public; their crude notions of obtaining cheapness by the competition of concerns heavily-weighted with separate establishment charges being as notions of obtaining speed by the free running of

heavily-weighted horses. Those who wish to study the economising principle involved will find it stated in the transactions of the Statistical Society for 1859. Yet we do propose to allow of open competition. Sir Rowland Hill was of opinion that a Government monopoly in the letter post was unnecessary, and we consider that a Government monopoly of the inland telegraphs was, as I have stated, a large economical mistake. We believe that in those cases, and also in the case of the ocean telegraphs, the administration would be better without any monopoly. In all cases of systematised public arrangements minor collateral conveniences are apt to be overlooked, and are sometimes necessarily postponed or set aside; but we consider that private interests ought not to be allowed to be sacrificed to any system. The railway companies might have been left free to use telegraph lines for their own working. The colonies, we consider, should be allowed full freedom, and receive all such Government aids as they may require for the development of their own means of communication. The great mass of the ocean cables may be said to be British, created by British capital, and communicating mainly with the British dominions. In the so-called French cable there was very little, indeed, French capital, and there was probably less American in the Anglo-American cable. Not above one-twentieth part of the ocean cables go over foreign shores. We really need, however, only concern ourselves with our own colonies and dependencies in the first instance. But we may well enlist foreign commercial interests with us, by extending to them all the advantages of cheap ocean message-carrying which we obtain for ourselves. If they thought they could get the work they require done cheaper by their own Governments, they should be offered every facility for so doing it. In the instance of the inland cables, however long they had continued in private hands, it was clear to all economists conversant with the subject that their ultimate purchase was inevitable, because it was impossible to suppose that the intercommunication of the country could have been allowed to continue depressed and restricted by the burthens of dear capital and duplicate establishments, and the privation of branch extensions. All delay in the requisite changes of the existing economic conditions is in aggravation of the eventual public charges. The first Chairman of the chief inland telegraph company, Mr. Ricardo, urged at the outset of the enterprise that the work should be placed on a public footing. The Chairman of the first working Atlantic Ocean Telegraph Company, the Right Hon. J. Stuart Wortley, and also Mr. John

Pender, M.P., now Chairman of the Eastern Telegraph Company—ten years ago, when he was Chairman of the Telegraph Construction Company—made similar representations as to the ocean telegraphs in time to have made a great saving.

Great Britain is now altogether the greatest goods carrier in the world. Let its relative position in this respect be more particularly considered, that we may form some idea of the exertion that may be needed for alertness and economy to sustain its present advanced position against its competitors. Of the 56,281 sailing vessels in the world known to Lloyds', according to Mr. Jeula's list for 1873, 20,832 were British, 2,182 were American, 1,417 were French, 3,974 were German, and 1,447 were Dutch. Of the total tonnage of the world 37·51 per cent. was British, 15·03 American, 6·30 German, 5·41 French, and only 2·57 Dutch. Of the 5,148 steamers in the world 3,061 were British, 403 American, 392 French, 200 German, and 95 Dutch. Of the tonnage of the steam vessels of the world 60·34 per cent. was British, 11·16 American, 7·32 French, 4·73 German, and 1·85 Dutch. Great Britain is the largest goods carrier because it is on the whole the cheapest and safest. But looking at its geographical position, and its disadvantages in respect to distance from many of the chief markets, it is of primary necessity that every means should be used to make it the speediest, the most punctual, as well as the cheapest, by complete and cheap means of information and guidance at the most remote ports, and the safest by storm warnings and directions of aid on the occurrence of shipwreck. The number of vessels posted on Lloyd's 'Loss' book for the year of 1873 was no less than 3,143. Besides these there were 165 missing vessels, of which 16 were steamers. The crews all told in these missing vessels, Mr. Jeula states, were 2,299. The annual total loss in the Channel and about our coasts is three times the number of the fleet of ships that were mustered against the Spanish Armada, and upwards of five times the tonnage of all Cromwell's fleet, with which under Blake he kept Christendom in awe. Then again, a sea police is required to be kept on the alert, for the protection of all our goods carriers and the pursuit of pirates. Of the new and cheap public lines of communication now wanted are lines from Halifax to Bermuda, *viâ* Windward Islands to Demerara, from Demerara to Sierra Leone, thence to Cape Coast Castle, Ascension, and St. Helena, to the Cape of Good Hope, thence to Natal and to Mauritius, thence to Galle, forming a complete alternative line to India and Australia. This could be constructed at a further charge to the State of

about 150,000*l.* a year; and it will be proved that the income from the whole system would be about 1,500,000*l.*, at a total charge of 670,000*l.* per annum. It may be expected that the shipping and mercantile interests, and the Chambers of Commerce, and also the Army and Navy Departments, as well as the Colonies, should be anxious and moving in the matter.

Great Britain is, from its security and position, the cheapest market for capital, and London is becoming the chief banking and money-lending capital in the world, as denoted by the progress of the Bankers' Clearing-house in Lombard Street, where the amount cleared advanced from 5,359,722,000*l.* in 1873 to 6,003,335,000*l.* in 1874; where on the last settling-day more than fifty-two millions were cleared—that is to say, an amount for that one day forty times greater than the annual revenue of the kingdom in the time of Elizabeth, when the Royal Exchange was instituted, and when Lombard Street was much as it now is, a banking centre. This denotes a state of business which requires great care to keep together and in advance, and the aid of all means of alertness to make even the 'nimble ninepence' of this country more effective than the 'slow shilling' of other people. To this end it behoves the Government to augment the banking power of giving ready assistance and transmitting and collecting capital in the smallest sums, by cheap telegraphs, in every direction.

Great Britain possesses more than nine-tenths of the ocean cable telegraph lines now laid in the world; it is, therefore, in a position to be the cheapest and the best ocean telegraph message-carrier for all other people in the world, and to do the work cheaper for them than they can do it for themselves.

Adam Smith fully recognised the value of the colonies to the mother country. But in respect to them what he contended for, viz. freedom of trade, was not exemption from fiscal charges, but freedom from monopolies. The monopolies being abolished, we must now keep the trade of the colonies by their interests and goodwills. He, I believe, it was who first spoke of England as a nation of shopkeepers. It is well that we should accept that designation in the sense of our economical position as a nation of shopkeepers, chiefly selling goods of our own make. It is on our great 'turnover' of 650,000,000*l.* that we must depend against bankruptcy. In that point of view the Ministers of our Foreign and Colonial Departments should be admonished and kept to the proper duties of their position as shopmen—or those on outdoor service as bagmen, bound to have an eye everywhere to business, to look out for and develop new sources of production and trade, and to be warmly civil, inviting, and obliging to new settlements, as new customers, instead of being,

as they have usually been, coldly repellent to them, as they were at first to the colonists of New Zealand, which has now an export trade of 5,000,000*l.* As of the known habitable parts of the earth there is not more than about one-sixth estimated as inhabited, there is great field for further enterprise, and choice of new settlements for our neighbours as well as ourselves.

Hitherto we have regarded the effect of reducing the time and cost of intercommunication in the home aspect of bringing the colonies nearer to us; but we should take the colonial view of the results of bringing the old home and the home government nearer to them. To them especially the economical results of the reduction of the expense of telegraphic communication and of goods and passenger transit in facilitating colonisation, extending their markets, stimulating production, and augmenting the value of their lands, must be immense, and should arouse exertions for their attainment. To them the political results of cheap telegraphy will be of special importance as bringing them nearer to the home government. An opinion which was lately expressed in a high quarter, that the distance of the colonies rendered closer political connection impracticable, may be regarded as the deplorable result of an overwearied and distracted attention which overlooked the great new fact that science now annihilates time for political as well as for commercial and social communication. If the regular occupation of three of the Anglo-American cables were cleared for the occasion, a five-column speech or debate of the night on a Dominion question might appear in all the papers there on the morning following, and a reply debate of the same day appear in the British papers on the morning after. If the cables had been laid in the time of Sir Francis Head and of Sir James Stephen we might have witnessed some brilliant word fence across the Atlantic. But the instinct of Downing Street is against bringing the colonies nearer, as bringing trouble nearer;—as disturbing settled routine, and occupying disagreeably the time given to agreeable society or the intervals of repose between the regular monthly despatches. But such interruptions will come; they will come through the press; they are not now to be kept off or postponed. The colonists and those in need of help in battle or in storm will not be kept in silent agony, in suffering, or in peril—in patient complaisance for official ease. They must be attended to; and it were cheap to provide new agents for the new, great, and urgent duties which our economical and political conditions require. The new nerves of sensation of calamities everywhere will be nerves of painful

sensation to prevent torpor and stimulate action. That the departmental action may be free, and its communications be safely full and explanatory instead of being restricted and enigmatic as at present, it must be put on the same public footing that is required for commercial and social intercommunication.

The first impressions of colonists are naturally of surprise and satisfaction at the accomplishment of the wonderful means of communication, though the great majority must feel, from the high rates, that it is not for them or their immediate benefit that it is accomplished, and for aught they have hitherto been told, it cannot be otherwise. But they have to be informed that economical science has proved that the gift of electrical science shall be not for the few but for the many. The colonial representatives should be made aware that the discovery has brought them close to the Imperial Government, or the Imperial Government close to them. It has brought them, as it were, into the presence of the Council of the Empire, with a power of speech, or of free communication, which is due to them as a right for public purposes in the common interests as well as for the social and commercial purposes of the colonists.

In the Dominion attention has been aroused to the grievous obstructions of heavy rates, but I do not consider that the agitators on the question there are taking the right course on economical principle for getting rid of them. It is to be hoped that they will set the example of an agitation more efficiently directed. All competent parties, including many engaged in the first railway works, who have considered the matter are agreed in lamenting the great evils entailed upon the country and upon shareholders, by default of economical principle in dealing with the railways and not putting them on a proper footing at their commencement. It is to be regretted that, from the defaults due to the defects of superior education and the want of scientific knowledge and interest in the last great scientific invention of this age, after the railroads and steam navigation, and from the ignorance of economic principles for its application for general benefit, we are drifting into the like evils of waste and obstruction to which railway transit is subject unless strenuous exertions be made to avert them. As any initiative is now little to be expected, under existing conditions, from within, whence it ought to come, it must be given from without.

In respect to the expediency of superior instruction in political economy as means of staying the wastefulness of ignorance, I may state that in France, from the experience of the like evils, it is pretty well determined in superior instruc-

tion to include, besides political economy and statistics, jurisprudence.

This example, of including jurisprudence in superior education, is one, on the advantages of which I might dilate, as another means of augmenting those great mutual interests in question. Before parting with it, and as I may not have another opportunity, I beg leave to make a brief digression upon it.

If we observe the strong hold which the Code Napoleon gave to France over its annexations as well as over its colonies—a hold which in itself it almost required military force to sever—codification for the colonies, as well as for ourselves, might well enter into the early consideration of the Government of England. But that it may in time do so, jurisprudence must be commended as a branch of superior education, for unfortunately the elements of the science of law as it ought to be, as distinct from law as it is, does not form part of the law-makers of England, and hence our home legislature is incompetent to codification, for home service; incompetent to entertain, or to judge of; and nothing partaking the character of science goes into Parliament, that does not as a rule come out worse than it went in; of which the very postal inland telegraph measure is an example. But the chief officers of the East India Company—James Mill and John Stuart Mill especially—were well versed in jurisprudence, and on their initiative our Indian Empire is now saved from the mess of the English law, and is provided with a systematised code in the lines laid down by Bentham; which is declared by competent judges to compete in quality as far as it goes with the Code Napoleon or any code existing. At home we have Scotch law and Irish law, as well as the English law, dealt with practically apart in different chambers. In our possessions we have no less than sixteen sorts of laws—old French law and new French law, of the Code Napoleon, old Dutch law and new Dutch law, and others. The importance of uniformity, and of codification, especially of the commercial law, is increasing, whilst the different colonies are, it is complained, legislating in their rude ways and increasing the evils of unnecessary diversities and impressions. It may be suggested, that it were time that some intercolonial movement should be initiated to get action taken upon Bentham's two great organic maxims for codification; namely, to do the same thing everywhere the same way, choosing the best, and to call the same thing by the same name everywhere; to have the same procedure and the same nomenclature.[1]

[1] See Appendix B.

DISCUSSION.

Lord ROSEBERY said that it was owing to the indifference on the subject that they required to discuss a question like the present, because our want of connection with our colonies was due more to the want of interest which prevailed in every class of society, than to any other cause. Indian and Colonial debates were the two emptiest debates we could find in either House of Parliament, and owing to this indifference he might say that no English statesman had ever seriously considered the problem how to connect our colonies more closely. Propositions like the one he regretted to hear from their Chairman that morning, that the best thing would be to let Canada go, were too common. That was a very judicious observation, so far as it went, but Canada did not want to go. It was hardly a gracious thing to say, 'Darling child, we have watched over your infancy with much interest, but we would much prefer that you should now leave your paternal home for ever and for aye.' It was hardly dignified on our part, and hardly complimentary to them. Again, we had never shown the interest we ought to get the quarter of a million of emigrants we sent away every year to go to our dominions, instead of some other and probably hostile State. There was not the slightest solicitude shown to keep them under our own flag. Seeing that this indifference was so great, he thought the first thing we should consider was whether we could not promote a more general and more real interest in our colonies than existed at present. There was certainly no use discussing this question in small assemblies, if nobody in the country cared about it. This was a difficulty greater than people who talked in society seemed to think, and one which he imagined was constantly overlooked. We were told we would do a very good thing if orders of honour and distinction, such as we set such store by in this country, were offered to Indian and colonial subjects. That was all very well, but before we made these distinctions valuable we must not merely find the people on whom to confer them, but we must assimilate society in the colonies to what it was in this country. There was no aristocracy in the colonies. Aristocracy was not a thing which a Social Science Congress could make and send out in a band-box to any part of the world. We tried in the early days of our American settlement, under the guidance of no less celebrated men than Locke and Lord Shaftesbury—not the philanthropist, but the Lord Shaftesbury of Charles II.'s reign—to institute some order of nobility in, he thought, South Carolina. There were to be Margraves and Landgraves, and people who were to represent those functions which in English society were represented by dukes and marquises, and all the rest of them. But when it was found that when a Margrave wanted a fire he had to cut down the wood for it, or that when a Landgrave wanted a house he had to build it—when these orders were found to be such an institution, they were quietly dropped. He believed there were some descendants of Landgraves in the United States; and though they might be proud of it, he thought they would be very shy of assuming the title. The absolute different

conditions of society seemed to him a very great difficulty to face. Here we had an old feudal monarchy which had grown up with all classes, there a fresh and vigorous people placed in a new land, making its own society under totally new, totally untried conditions. In these circumstances it was hopeless to try to bind the empire together by an order of St. Michael or St. George. When he was in Canada last year, he asked a leading statesman how this problem was to be solved. That statesman said it was not very easy to point out how it was to be done, but if we would only give them the feeling that they were Englishmen like ourselves, that there was no difficulty in a Canadian becoming a Minister or a peer, or achieving any of the objects of ambition we had in England, great good would be done; a Canadian in England was as completely a stranger as a native of Japan, in fact a great deal more so. He considered this a very forcible remark, and it would be well to see how that part of the difficulty could be removed. Mr. Eddy's paper suggested that we should do something with regard to the Privy Council, but there another difficulty met us, which was as to what functions that Council would be limited. He had always thought, although he merely threw it out as a suggestion, that a more practical means would be to have a Colonial Council like the Indian Council attached to the Colonial Office, just as the Indian Council was attached to the India Office; and if seats were offered to distinguished colonists, they would have some tangible attraction for colonists considering themselves still a part of the mother country. He considered it was absolutely hopeless for them to try to frame any tangible method of connecting the colonies with the home country till they could excite in this country a greater sympathy and interest in our colonies. How that was to be done was of course a moral problem, and he was afraid he left them very much in the state in which he found them. The want of interest in our colonies was a national disgrace. Till that was removed we could hope for nothing in any discussion.

Mr. R. A. Macfie (Edinburgh), with regard to the proposed council, said if it was merely a consultive body, it would not suffice to attain the end they had in view. We ought to look the question in the face and recognise the fact that the colonists were fellow subjects and entitled to the same rights and powers as we have. They ought to be placed on a footing of equality, and have the power to declare war, to negotiate treaties of peace or of commerce. They had a right, he maintained, to unite in the discharge of the various great trusts towards the world which were in the hands of this country. We could not look to any other country in the world to take our place. The United States sought to become the manufacturers for mankind, and the promoters of Christianity and civilisation all over the world; but could they do it as we could? They were knitted together, while our countrymen, on the contrary, were scattered all over the world. Our island was surrounded by the sea, but instead of it being a barrier it was our great highway and means of strength. The sea was not only our glory but the cause of our greatness. We ought boldly, then, to say to our colonists, 'We are not afraid of you, and we know

you are not afraid of us. Let us unite in one great imperial council; you will have a voice in the government of the imperial affairs of the country, and England and Ireland will govern their own affairs.' The grand affairs of the empire should be left to a federal council, chosen from all parts of the empire, who would work together and keep the empire stronger in the future than it was now.

Sir COOMARA SWAMY (Ceylon) quite agreed with the noble earl, that the indifference to subjects connected with our colonies was not a subject of which we had reason to be proud. During debates in Parliament on matters connected with India he had made it his duty to attend, and had come away with the impression that Indian interests, he regretted to say, did not receive the attention they deserved. On one occasion, when an important subject was under discussion, he had counted the members present, and he was in no way exaggerating when he said that there was not more than was required to form a quorum. It so happened that even some of the members who were in attendance were fast asleep. He merely mentioned this fact to show what the real state of the case was. He had asked the reason of this apathy, and some members had informed him that they did not understand the subject at all, and that very often those who professed to know the subject, instead of agreeing as to the conclusions, differed from each other so much as to render the confusion more confounded. Nothing could therefore be more important, he thought, than that members of Parliament should study these subjects, he hoped by travelling in these distant countries, and becoming acquainted with them and their people. The best means of drawing together this kingdom and her colonies was by convincing the people of those distant lands that it was to their interest to be united with Great Britain—convince them that it was for their good, that the union with this great empire was productive of good, and they would only be too glad to remain in the position in which they now were. As to the desire for an aristocracy in the colonies, did not that show that the people of those countries did not wish to be severed from Great Britain? What did they ask for? The honours and dignities of this great empire; not new honours of their own. With regard to the necessity for a council, it was a subject which required a great deal of consideration, which no doubt it would receive. Another means to draw the interest of this country and the colonies together was, he thought, the common education which the easterns were receiving at the present day and the common language they were beginning to acquire. This would, in the course of time, produce harmony, and create a desire to continue to be linked together as we now are. They were far removed from each other, but when they found the education of the two countries the same, and the same ideas imbibed in the same shape, and tastes becoming the same, the question would naturally arise, 'Why should we separate from each other rather than continue as we are?' Another fact was to impress on the minds of the people that to educated men in India was offered a career as good and grand as we offered to our own countrymen. What was to become of educated men if not allowed to rise, as many in this country were? If they were allowed to distin-

guish themselves and obtain the same office as natives of this country, he felt sure there would be a cause of discontent removed.

Professor DONNELL (Dublin) had failed to catch an intelligible answer to the question propounded for discussion. Mr. Chadwick's answer was that we should cheapen the means of intercommunication, and increase the facilities afforded by the telegraph and the Suez Canal. Surely there was nothing special in the intercommunication between England and the colonies that railways, the Suez Canal, or even the telegraph could give. These material developments were quite as much in the service of other nations as they were in that of England, Ireland, or Scotland. He thought the noble earl who had spoken on the question and Mr. Macfie had been a little led astray in their views by the common stock phrase 'mother and daughter' as applied to the relationship of England and her colonies. This metaphor, as signifying the relationship between Great Britain and her colonies, had no analogy at all. The question had been discussed as if there was only one colony, and could be dealt with in one way. However it would require quite a different answer in the case of India and the other colonies according to the extent in which the English element prevailed and according to their economy and stage of growth. Take Canada for instance, he would like to know what analogy there was in that case. The Canadians were full grown and educated people of our own blood and our own race, and perhaps a little ahead of us in many respects. He could not for the life of him see how the comparison of manhood and infancy was not equally applicable to Scotland or Ireland. As to the suggestion of the noble earl, he thought it might be the aspiration of a few ambitious officials that the orders of the British peerage should be distributed with a lavish hand among the more distinguished people in the colonies, he did not think our experience of the British aristocracy had been altogether of such a nature as to commend it to a new nation which had not been similarly blessed. As to Canada, our only connection was that we sent there a Governor-General. On every other subject of domestic legislation the Canadians were altogether independent of us. Her commercial policy was at right angles with ours. They are protectionists, while we are free traders. It was the same with the Australian colonies, and we have not the slightest influence on their taxation. With their commercial or agricultural policy we had no right, nor would they permit us, to interfere. We sent and paid for a Governor-General to Canada, and also paid a large portion of taxes for an army and navy to protect these colonies.—Lord Rosebery: We do not pay the governors of colonies. —Professor Donnell thought that in some of our dependencies we did. However that was a small matter. It was an admitted fact that a portion of the taxation for the army and navy which protected our colonies came out of the pockets of the British taxpayer. He wished to know whether it was fair that poor Irishmen should be compelled to pay out of their scanty means for the support and protection of the people of Canada, who were better able to do so than the Irish were. He could not see why the working classes, who were barely able in many parts of the country to live from hand to mouth, should be taxed in a

monstrously unjust way by the present system for the protection of communities fully grown up, wealthy and well-to-do. He affirmed that it was most unjust, and could not long continue. Adam Smith proposed a far better scheme than a council. He proposed an imperial Parliament in the proper sense of the term, in which all the colonies should be represented. Even in his time, 1776, it was thought too late to follow such a course; and if it was too late then, surely it was too late now. The only thing we could do was to let these communities govern themselves, as a council sitting in London could not possibly be so effective as one held in the country whose affairs it was dealing with. It would be wise to leave them to pay their own taxes, and let us confine ourselves to the payment of our own. He thought this would be a good thing both for Canada and for us. There was no question that the existence of Canada was a weak point in the British empire. The nominal connection through a Governor-General was one of our weakest points, and we could not possibly quarrel with America so long as this nominal tie existed. This question had been discussed by Mr. Goldwin Smith, and Professor Donnell thought that that gentleman had proved almost to a demonstration that the only argument that would stand the criticism of an intelligent mind for five minutes was that of prestige. That the prestige of our colonial empire added to ours meant simply the appearance of strength which we have not.

Mr. MEENACSHAYA (Madras) was glad that the noble earl in the course of his remarks had stated that there was a great want of interest felt in this county on all Indian affairs, and hoped his Lordship would give some consideration to the state of India in his future life. He considered that the best means of promoting a closer union between this country and India was to make the latter understand that justice was done with that impartiality and fairness of which the English were and ought to be so justly proud; and to make them understand that they were treated on a footing of perfect equality with their fellow-subjects of Great Britain. Unless this was done, we would never reconcile India to the foreign rule, nor remove the disaffection and impression that justice was not rightly administered. The financial relations between England and India would also require to be equitably adjusted before all discontent was removed. The mismanagement of Indian finance had become of late years almost a scandal. Even in times of prosperity and peace the expenditure exceeded the income for carrying on the ordinary work of the Government. Whenever the interests of England and India came into collision, the latter was sure to suffer and be compelled to give way. Another crying evil was the monopoly of services in the country. He did not understand why the doctoring, engineering, bridge-building and clerkships should be monopolised by Englishmen. The country was flooded with European agency, and he wished that this invasion of the foreign element could be, as it ought to be, checked. Another suggestion he had to throw out was, that they felt they fully deserved to have some voice in the administration of the affairs of the country, whether in England or India. It was nothing better than a farce to have the Indian budget gravely introduced in the House of

Commons when there was nothing but empty benches. If the members could not devote sufficient attention to the subject, let the farce be removed, and allow the Secretary of State for India to be at the head of and administer the affairs of that country.

Mr. M. W. Barry (London) stated that the theory of union with the colonies rested upon the assumption of relative inferiority and superiority of race, and upon the farther assumption that the conjunction of the government of our race would be beneficial not only to one stronger but also to a weaker section. He asked any impartial man to look at the history of our colonies, and say whether this condition had been fulfilled. If our rule had been as benignant as was represented, how was it that we were so much detested, especially in India and Ireland? He believed with Mr. Macfie that there was no other country more qualified than we were to lead in the van of Government inferior races, that was supposing such a course was imperative. He did not believe it was incumbent on a great power to take in charge the interests of peoples far more numerous than ourselves, and presumably able to take care of themselves. Coming to later times, he might refer to the annexation of the Fiji islands. At first Lord Carnarvon declined to accept the offer, but nevertheless still retained a hold upon it. When the premier of these islands stipulated certain conditions, Lord Carnarvon, although unprepared to accede to them, still held him to the offer of cession. We were bound to assume that this so-called prime minister was the exponent of the intelligent power of the country, and if so, he should have been recognised and treated as such. Lord Carnarvon had said this country only accepted Fiji as a Crown colony, which simply meant it would be governed by martial law. The result would be a repetition of the old miserable experience of colonies in times past. The statement that Canada did not wish to be severed from this country was only the expression of a minority—the desire of those who did not wish to be absorbed by the United States: and they think that by putting themselves under the wing of this country they will postpone that dreaded event. The majority of the people of Canada, he had good reason to believe, anxiously desired union with the United States. It was therefore time we were putting the house in order and conducting the Government in such a way as to recognise the perfect equal right of all subjects of the Crown to equal civil and political privileges. What was wanted was a local or national parliament in each country, represented it might be in this country. There should be a representative of the country in the imperial Parliament, not only a representative power, but a power in proportion to numbers. If this was not done, he had not the slightest hope we would retain our hold on the colonies.

Mr. W. Botley (London) quite disagreed with the remarks of Mr. Barry. Societies like this, and Chambers of Commerce might further the movement by assisting to carry out what had been foreshadowed in Mr. Chadwick's paper, especially as regarded telegraphs. The increase of facilities referred to would do much to produce the solidarity of the empire.

Dr. Thompson begged to say, in referring to the early history of the

colonies, that as far as America was concerned, they had no quarrel with the English nation. He wished that to be distinctly understood and remembered. Their quarrel was with the Ministry and Government of the day, on the ground that they were taxed without representation. If we now persuaded the colonies that their interest is identical with those of England, and that England desired their prosperity as her own, whatever the formal adjustment and conditions of union might be, the end would assuredly be gained. Now that distance between countries was annihilated by steam and the telegraph, the jealousy which formerly existed was displaced by more enlightened views on political economy, and it was now impossible that such grounds of complaint and division should arise between England and her colonies as unhappily occurred 100 years ago. It had been said that at the close of the recent war the United States had emerged with bitter feelings towards everything English. He had never known that as the condition of the public mind in the United States. They felt that they had a grievance with the British Government upon certain points of international law—a grievance perhaps with some portion of the English press; with the English nation, with things English, with English ideas with English institutions—never! They cherished these as their own —as amongst the most glorious of their traditions. Demagogues there were who pandered too much to the embittered feelings with which the Irish came over, and who tried to make capital out of passing events; but in the mind of the thoughtful people of the United States any feeling of bitterness against England did not exist. They concurred in the desire that the integrity of the nation should remain unimpaired for the highest civilisation of mankind and the prosperity of the world.

Mr. Magnus Randal (Leith) said that if Canada wished to be severed from Great Britain, it was a great mistake to prevent her. The learned Dublin professor and his ideas, as well as the ideas of the school of political economy to which he belonged, the speaker took exception to. This Manchester school of political economy was fast sinking, as its remedies were so untenable that it was impossible to carry them out. Their doctrine arose from the great expense of the colonies to Great Britain. The idea of a general council as being the best was not approved by many gentlemen who preferred representation in an Imperial Parliament. To make room for representatives from Canada, several unimportant burghs should be disfranchised.

Sir George Campbell felt he was in the position of one who had already taken a side, because in his address as President of the department, he had decidedly expressed the opinion on this question, that he believed the idea of uniting the colonies with the empire in a perpetual bond of love and union for ever and ever was not possible. It seemed to him that Lord Rosebery suggested difficulties in the way of union of this kind, rather than solved them. He entirely agreed with his Lordship in thinking that the great difficulty lay in the ignorance and indifference which prevailed in this country in reference to the colonies. In regard to India, he was inclined to think that that ignorance and indifference were natural and insuperable. It was hardly possible to bring the people of this country to take an

interest in the very various affairs of the colonies when they had such paramount interests of their own to look after. He had himself experienced the feeling which had been so ably and eloquently expressed by a native of India that day, in regard to the affairs of that country being discussed before empty benches in the House of Commons. The more he thought and inquired on this subject, he was led to believe that the feeling was natural. In India the interests were most complicated, and no man could understand them who had not devoted a great portion of his life to their study. The same remarks were applicable to Canada and Australia. They perhaps had dwelt too little on economical considerations, and two largely on the political side of the question. He agreed with the gentleman who had referred to the relationship between the mother country and the colonies, and considered it a mistaken analogy to compare them to 'mother and daughter.' It seemed to him that the position of Canada very much resembled that of a grown-up son, and our relations would be very much regulated by the analogy between these two. Canada was like a grown-up son, with a competency of his own and capable of earning his own bread. He said to his father, 'I am a grown-up man, and know how to manage my own affairs, and do not wish you to dictate to me. I make the money and have a right to spend it.' This was the position of Canada, and this grown-up son went on to say, 'Although I do not approve of your interfering, still I am ready to continue the connection so as to take help from you. You may be bound to me but I beg to decline being bound to you.' That, he held, was an unjust and unfair connection. As long as the colonies were incapable of managing their own affairs, by all means let them lean on the parental connection; but when they were able to look after themselves, we were bound to look to our own interest. We were entitled then to say, 'You may like to lean on us, but we do not care to be leant upon to that extent necessary—we will only agree to the connection if fair on both sides. We decline to have a one-sided connection, by which we are bound to assist you and you are in no way bound to give us that assistance without which it would not be a fair and equal bargain.' He did not think it would ever be possible to bind Canada down to assist us if necessary, but at the same time he thought we did not pay much for our self-governing colonies. He did not grudge the small expenditure which might be involved if that were all, but the indirect liabilities were enormous. In the case of Canada, it would be a very good thing if her position prevented a quarrel with the United States; but she retarded us in dealing on equal terms with the United States and might expose us to humiliation and the expenditure of millions of pounds any day. He did not see how we gained anything by the connection except in the form of sentiment. He was inclined to think that in the case of Canada the sooner the connection with the mother country was severed the better. ('No, no'.) We could not apply any uniform rule to all the colonies; every one required to be dealt with according to the exigencies of its own case. They had not all, like Canada, reached a state of maturity, but when they did it might be necessary to separate from us. Although no doubt telegraphs

annihilated space, they did not annihilate climate nor render identity of interests and feelings. He hoped the good will of countries would not be dependent upon the direct political connection, and trusted that some day or other the world would be united in a general federal bond. Outside of such a federal bond he did not think there could be permanent unity of this country. He moved that the paper of Mr. Chadwick be referred to the Council, with a request to consider what action should be taken for the promotion of a cheap and extended system of ocean telegraphy.

The motion was seconded by Mr. MACFIE, and agreed to.

American Poor Laws and Public Charities. By F. B. SANBORN, General Secretary of the American Social Science Association, and Chairman of the Board of State Charities of Massachusetts.

IN the narrow limits of a paper presented for reading at the brief session of a Congress so comprehensive in its range of topics as that now assembled at Glasgow, it will not be expected that I should do more than point out some of the general features and more important provisions of poor-law administration in the United States. And even in regard to these it must be said that the differences of condition and of administration in the different portions of that vast region which the Federal Government includes in its jurisdiction are almost as great and as various as those which exist on the continent of Europe. Pauperism in Louisiana and Florida is almost as unlike pauperism in New England as the mendicancy of Spain and Naples is unlike the poverty of Norway or of Scotland. Not that the differences are the same in character, however, but only in degree of contrast, and in the manner wherein they are dealt with by the laws and customs of each locality. Yet it is to be noticed that the poor-laws of New England and the method of administering them have for centuries had a tendency (very pronounced and active within the past fifty years) to influence and modify towards similarity the diverse conditions just mentioned. This is partly by reason of the antiquity and strictness of the New England method, which has been more uniform, I will venture to say, than that of the mother country, and therefore likely to prevail over systems that were more lax, changeable, or irregular. Partly also it is because New England has been the hive from which have swarmed the emigrants who have colonised a greater part of the United States and of the Dominion of Canada than has been settled and shaped into civilisation by any other race of colonists. Very early, and in

very subtle and forcible ways, did the New England element penetrate the rest of the colonies and provinces that now compose the older States, and the Eastern divisions of British America; and wherever they went these long-headed and long-handed Yankees carried their institutions with them. When they went to colonise California, 25 years ago, they took their houses ready-made for building along with them—a type of the manner in which they colonised Nova Scotia and New Brunswick 100 years ago, New York and Pennsylvania in part even earlier, Ohio at the beginning of this century, and every new district successively as fast as it has been opened to settlement. Thus we find, quite naturally, that the spirit and many of the forms of the New England poor-laws exist in States where the conditions of New England pauperism are scarcely to be discerned.

It is hardly correct, however, to speak of the pauperism of New England, or of any part of America, as New England or American pauperism. That evil is and always has been chiefly an imported one. What we have has been mainly grafted upon us from a foreign stock, or bred from the imported seed which African slavery has scattered in our soil. Europe (and chiefly the United Kingdom), along with the Southern States of our Union, are the most prolific sources of pauperism in America; and they are so because they have fostered, as our Northern States have not, a needy proletarian class, accustomed to depend upon alms, or upon the providence of others, for at least a part of its support. Such a class, however created, is the hotbed of pauperism, and wherever the institutions or the accidents of a nation produce this class and make it permanent, there pauperism becomes inveterate and almost incurable, as it has often been declared to be in Great Britain. Until lately it is certain that the institutions of the free States in America did not tend to breed this proletarian class, transmitting its characteristics by inheritance, and unable, except in individual cases, to rise above the distressed circumstances in which it finds itself. The agricultural population of the country and the tenement house population of the cities, in Great Britain and Ireland, must be constantly on the verge of pauperism, and hundreds of thousands are always over the brink and in the slough itself. In England alone, where perhaps pauperism is worse than anywhere else in the world, the average number of paupers is very nearly a million persons; in France, though much less, it is still large, and so it is in Belgium, in Germany, in Italy, and in Spain. We probably shall not be extravagant if we set down the constant number of paupers in Europe at

5,000,000, without reckoning the lately emancipated Russian serfs, of whose condition we know little. From this morass of poverty come many of the streams that find their way to us. Pauperism is not native to America, but imported and continued here; and however careful we may be to provide for our own poor, and to extirpate the causes of poverty among us, we shall always find our efforts largely neutralised by these fresh importations from England, Germany, Ireland, and the other countries that send us their emigrants. This is a natural consequence of our position among the nations, and must be accepted as such, along with the greater advantages which we derive from the same source. The blending of races and nationalities on this continent is one result of that wave of emigration which brings with it a sediment of pauperism as well as the force that develops and stimulates our nation.

But we have also a source of pauperism nearer home—the degradation of the coloured labourers of the South. This population is by no means so formidable to us by engendering pauperism as is the great mass of European poverty, for it is as yet much more manageable, and there is good hope that the influences now at work to extend civilisation among the Southern people of all colours will gradually improve their own condition. But for many years to come the freedmen at the South will need, in a peculiar degree, the oversight of philanthropy, and their claim to attention cannot be neglected without risk to the whole country. The North will not be likely to receive many of them, whence they will be repelled by the climate, as well as detained at the South by other causes. But some find their way to the North, and among them, as the overseers of the poor everywhere know, is an undue proportion of persons dependent on public charity, or under sentence for crime and misdemeanors. Pauperism and crime being closely connected, as Edward Livingston and other philosophical observers have long since remarked, we find the same thing true of the poorest part of the British and German emigration to this country. Hence both crime and pauperism are noticeably most common in those States, like New York and New England, whereon the wave of emigration, rolling across from Europe, first strikes and deposits its sediment.

New England, as being the earliest settled portion of the country, naturally had the first system of poor-laws, and these, quite as naturally, were based on the English poor-laws. One important part of the New England code, however, the 'Law of Settlement' as it is called, in its origin seems not to have been so much indebted to the English law as is commonly sup-

posed; for the settlement law, properly speaking, did not come into existence in England until 1662, when the statute of 14 Charles II., cap. 12, authorised the removal of a pauper to his own parish from a place where he had remained less than forty days. Previously that power did not exist, although in 1601 the celebrated statute of 43 Elizabeth, cap. 2, had made provision for the poor by establishing a system of compulsory relief. This statute is the foundation both of English poor-law, and of the poor-laws of New England and of the greater part of the United States, and of British America. The English settlement law was preceded in New England by a colonial law as ancient as 1639, which in the Plymouth Colony covered both provision for support and removal of paupers. It was ordered in that year 'that the court, or any two magistrates out of court, shall have power to determine all difference about a lawful settling and providing for poor persons, and shall have power to dispose of all unsettled persons into such towns as they shall judge to be most fit for the maintenance of such persons and their families and the most ease of the country.' This was followed, in 1655, by a statute which, after reciting that there was great complaint by reason of strangers pressing into towns without the consent of the inhabitants, there being 'no law to prevent the same,' empowered towns to prevent the coming in of such persons without the 'allowance of the prudential men,' and to require security at their entrance from those that brought them in. In 1659, 'for the avoiding of all future inconveniences referring to the settling of poor persons,' it was ordered 'that when any person, with his family, or in case he hath no family, shall be resident in any town or peculiar of this jurisdiction for more than three months without notice given to such person or persons . . . . that the town is not willing that they should remain as an inhabitant amongst them;' or, if they should remain after such notice, and there should be no application by the selectmen to the next county court for relief, then such persons were to be relieved, in case of necessity, by the inhabitants of said place.' In 1675 this statute was modified respecting those persons who had been driven from their home through 'the present calamity of the war' (King Philip's Indian War), and their support, when relatives were unable to provide, was thrown upon the 'public treasury.'

All this legislation was within the present boundaries of Massachusetts, and this law of 1675, now nearly two centuries old, was the foundation of the present division of the public poor in that State into 'town paupers' and 'State paupers'—the two classes now being about equally numerous. At that

time New England was substantially the two colonies of Massachusetts and Connecticut, upon which the other New England colonies depended; the population of the whole region in 1675 being but little more than 50,000 persons, where there are now 3,500,000. As early as 1673 both Massachusetts and Connecticut had published books of laws, wherein, by brief and simple statutes, sufficient relief was provided for the poor of the colonies. Every town was to support its own people in poverty, and a residence of no more than three months was sufficient to give a settlement in any town, provided the resident had not been warned to depart by the town authorities. Apparently the office of overseer of the poor, which had been created in England by Act of Parliament in 1572, was not introduced in New England until 1691, when it was established by law in Massachusetts; but its duties had been performed by other officers. We find mention of almshouses in the larger towns during the Colonial period which closed in 1692. The New England colonies then became four Provinces under royal governors, and this form continued until 1775, when the war of independence restored to the people the power of choosing all their magistrates, as they had done in the Colonial period from 1620 to 1692. During the Provincial period (1692–1775) the laws and customs of the mother country were introduced in New England and other parts of America with less opposition and modification than before—yet it does not appear that the English settlement law, or the English statutes in regard to the relief and occupation of the poor, ever became the law of any considerable portion of America; while in New England an entirely distinct and different law of settlement grew up, adapted to the circumstances of the inhabitants, and was accompanied by a systematic method of poor-law relief which gradually extended into other parts of the country, as has before been said. The strictness of the New England settlement laws has been imitated in but few of the newer States, and of late years has been greatly relaxed in New England itself; but the practical measures for relieving the poor that New England early adopted have now become almost universal in the Northern and Western States. The principal difference between the poor-law administration in New England and the newer States is, that in the latter the *county*, rather than the *town*, has the duty of relieving the poor imposed upon it; while in New England the strength and vitality of the township organisation have been such that the counties have little to do with the support of the poor, save in a single State (New Hampshire), where they divide with the towns the poor-law administration.

Whether supported by the townships or the counties, the permanent poor in the United States are generally placed in almshouses or 'poorhouses'—this term corresponding to the English word 'workhouse'—while the casual poor are relieved by aid in their own families. There are probably in New England nearly 700 of these almshouses, the largest of which are the State Almshouse of Massachusetts at Tewkesbury, containing more than 800 paupers; the City Almshouse of Boston, containing more than 300; and one or two of the county almshouses in New Hampshire, containing perhaps 150 paupers each. The whole number of in-door paupers in New England does not now exceed 15,000, or an average of less than 25 in each almshouse. In the 217 town and city almshouses of Massachusetts in 1873 the whole number of inmates was but 5,768, or 26 in each; while the average number during the year was but 2,579, or 12 in each almshouse. Outside of New England the almshouses, being either in cities or in counties, are larger. Thus, in the 56 county poorhouses of the State of New York the average number of inmates during 1873 was about 100; while in the six city almshouses of the same State the average number of inmates was about 1,000. In the 58 county and local almshouses of Pennsylvania, in 1872, the average number of inmates was about 125; but, excluding the great almshouse of Philadelphia, with 3,000 inmates, the average would be but 80 for the rest of the State. In 90 county almshouses of Illinois the average number of inmates seems to have been something like 20, in 50 almshouses in Michigan about 30, in 26 county almshouses in Wisconsin about 30, in 28 town almshouses in Rhode Island about 15. In these seven States, which now contain more than 15,000,000 inhabitants, there were in 1873 about 530 almshouses, or an average of one almshouse for each 280,000 inhabitants. These 530 almshouses contained in 1873 an average number of about 30,000 inmates, or something more than 50 to each almshouse; the cost of maintaining them with a constant population of 30,000 was between $3,500,000 and $4,000,000 in 1873, being an average weekly cost of something more than $2.25 (say eight shillings sterling) per week. The additional sums expended in these seven States for the support of lunatic paupers, the sick poor in hospitals, poor children, etc., may be estimated at $2,000,000 more; and the sums expended in out-door relief, strictly speaking, were perhaps $2,000,000 more; making the total poor-law expenditure, in a population of 15,000,000, about $7,500,000 (1,500,000*l.*). At this rate the poor-law expenditures of the whole nation

would be about $20,000,000 annually, or something less than 4,000,000*l.* But these seven States in reality expend more in proportion to their population than the rest of the country does; and it is probably a safe estimate to say that the whole United States, with a population at the present time of 42,000,000, pays annually for the support and relief of its public poor about $15,000,000, or something less than 3,000,000*l.*[1]

The seven States above named have been selected because in them the statistics of pauperism have for some years been more carefully collected than in the other thirty States, and this for the reason that in each of the seven a Poor-law Board—or something resembling one—has been established, and has made reports to the Legislature. These bureaux generally bear the name of 'Board of Charities,' and the first was organised in Massachusetts, eleven years ago, under an

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[1] '*The Ninth Census of the United States*' (vol. i. p. 568) sets this cost for the year ending June 1, 1870, at $10,930,429, in a population of 38,558,371, or a little more than 28 cents (one shilling) for each inhabitant. My estimate is higher, being nearly 36 cents (1*s.* 3*d.*) for each inhabitant. The Census tables, though ingeniously made up, according to an artificial theory of pauperism invented by the head of the Census Bureau, cannot be depended on even for their aggregate and general results, and are exceeding incorrect in detail and for purposes of comparison. Thus the table on page 568 gives the year's cost in Massachusetts at $1,121,604, a total manifestly made up from the three items—$854,609.56 on page 432 of the Seventh Report of the Massachusetts Board of Charities (for 1870), $241,994.41 on page 440 of the same Report, and $25,000 on the same page. But these items include at least $261,000 which was paid for the maintenance of lunatics in asylums for the insane—a class which the Census returns profess to exclude from the computation. Upon this theory, the reported cost in Massachusetts must be reduced to $860,604, thus showing an error of at least 30 per cent. in these figures. A similar error appears in the count of 'persons receiving support, June 1, 1870,' for of the 5,777 set down for Massachusetts not less than 1,400 were at that time inmates of lunatic hospitals and asylums. A much greater blunder is made in stating the nativity of these 5,777 paupers of Massachusetts, of whom only 381 are set down as of foreign *birth*. In fact, more than 1,500 were of foreign birth, and probably more than 3,500 were of foreign *parentage*. The number of foreign-born paupers in Maine, where the whole foreign-born population was less than 50,000, is given as 441; while Massachusetts, with a foreign-born population of 353,319 (more than *seven* times as many as Maine), is given but 381 foreign-born paupers—only *six* more than New Hampshire, which had less than 30,000 foreign-born inhabitants. New York, with 1,138,353 foreign-born residents, is credited with 8,147 foreign-born paupers, or one in every 142, New Hampshire with one in every 79, and Massachusetts only one in every 927. In fact, there are only one or two States—New York being one—which have a larger proportion of foreign paupers than Massachusetts. Again, with less than one-fourteenth of the whole pauper population (8,000 out of 116,000), Massachusetts is credited with more than a tenth part of the whole pauper cost, while New York, with more than three times as many paupers (26,152), is credited with but little more than twice the cost of Massachusetts for poor-law expenditure ($2,665,385). As a matter of fact, the poor-law expenditures of the City of New York are greater than those of Massachusetts, and in the whole State of New York they exceed $3,500,000 against about $1,100,000 in Massachusetts.

Act of the State Legislature passed April 9, 1863. Other States followed the example of Massachusetts and organised such boards, as follows:—Ohio and New York in 1867; Illinois, North Carolina, Pennsylvania, and Rhode Island in 1869; Wisconsin and Michigan in 1871; Missouri in 1872; and Connecticut and Kansas in 1873. In all, therefore, twelve States, with an aggregate population of more than 20,000,000, have established Poor-law Boards; but in North Carolina, Ohio, and Missouri they have been abolished, and in Connecticut and Kansas are so recent as to have effected but little. In Massachusetts and in Pennsylvania they have been the most active and the most comprehensive in their action; having undertaken in those two States to 'investigate and supervise the whole system of charitable and correctional institutions,' including the prisons, the schools for deaf-mutes and the blind, and the charitable establishments not concerned in the expenditure of the poor rates. Indeed, there are no poor rates in the United States corresponding to the poor rates of England—that is, no special tax levied for the support of the poor upon property of a particular description. A certain sum is appropriated in each town, each county, and each State for the maintenance of the poor, and this is taken from the common treasury, which is supplied by the general taxation of the town, county, or State. In most of the States the sums appropriated by the Legislature for the maintenance of the poor are small, being mainly for the support of lunatic hospitals, schools for orphans and for idiots, etc.; or special grants in aid of hospitals, dispensaries, etc., under private control. In Massachusetts alone there is a large class of 'State paupers,' both sane and insane, for whose support the Legislature annually provides, at a cost of some $250,000 a year. In Connecticut and a few other States there is a small number of 'State paupers;' but the rule in America, as in England, is that the poor shall be maintained in the locality in which they are found—either the county or the township. And since few of these localities have been in the habit of reporting their poor-law expenses and the number of their paupers, except once in ten years, and that very imperfectly, to the National Census Bureau, it is quite impossible as yet to obtain a general view of public charity in the United States with any exactness of statistical detail. It is only in a few States that maintain such Poor-law Boards as have been mentioned (and not always there) that the statistics of pauperism can be gathered with much completeness. Wherever this is done, it is usually found that the tables of the census have understated the num-

ber and cost of the public poor, as well as the number of the insane, of the deaf-mutes, and other dependents. Thus in Michigan, where statistical returns have lately been required for annual publication, the cost of maintaining the poor in 1873 was $403,096, where only $269,682 was reported in the census of 1870—an increase of nearly 50 per cent. in three years. Occasionally, however, as in Massachusetts, the fulness of returns for a series of years leads to an exaggeration of the number and cost of the poor in the annual reports.

The more important characteristics of American pauperism can be broadly read, perhaps, without the microscopic aid of elaborate statistics. At any rate this could be done a few years ago, and even since the great civil war began to disturb the relations—political, social, and economical—of the American people. Poverty has often been the condition of a great number of my countrymen, and was the general attribute of the whole country for half a century after the war for independence began in 1775; but pauperism has always been foreign to us. The dependence of one class upon another, and of any class upon the government, local or national, has been repugnant to American sentiments and institutions; and those races which have joined themselves to us, without having their personal independence vigorously developed, find it wonderfully stimulated after a generation or two of freedom and self-reliance. Even the negro, one of the most dependent of the human family, is establishing a capacity for self-help that was scarcely anticipated by his friends, while it falsifies the predictions of his enemies. He has not passed from the condition of a chattel to that of a citizen without encountering grave risks, among which are mendicancy and deliberate or unavoidable idleness; but his race do not yet furnish America with so many paupers as Ireland has sent us or bred among us. According to the census returns there were scarcely more coloured paupers in the whole United States, among a coloured population of 4,880,000, than there were of foreign paupers in the two States of New York and Ohio alone, with a foreign-born population (reported) of 1,500,000.[1] Probably the coloured paupers will increase during the present decade, but that increase is not alarming; less so than the manifestations of growing mendicancy and idleness in the great cities of the North, where the labouring population is now more than half made up of persons of foreign parentage. In the city of New

[1] There were 9,400 coloured paupers in the whole country; in New York 8,147 and in Ohio 814 foreign-born paupers—a total of 8,961.

York, for example, containing, as is supposed, 600,000 persons of foreign birth or parentage out of the million who inhabit it, there were seen last winter the most alarming indications yet witnessed in America of an able-bodied pauperism, such as is common enough in Europe. From a paper read at the May meeting of the American Social Science Association in New York, the following description of what took place may be cited as the testimony of a competent witness:—

'INDISCRIMINATE CHARITY IN NEW YORK.[1]

'New York, as is well known, is a large manufacturing centre, and employs great numbers of artisans and mechanics. It has also a vast number of ordinary day-labourers, as well as an unusual number of those who, in the best of times, just keep their heads above water. When the industrial and business panic came upon the city last autumn, it was seen at once by the benevolent and fortunate classes that widespread distress would ensue. . . . .

'Despite the warnings of the experienced, soup-kitchens and free lodgings were opened, by public and private means, with the utmost liberality, in various portions of New York, last winter, and enormous sums were contributed by private citizens for these popular benefactions. Before the winter was over, however, most of those engaged in them regretted, without doubt, that they had ever taken part in these kindly but mistaken charities. The reports of competent observers show what were their effects. The announcement of the intended opening of these and kindred charities immediately called into the city the floating vagrants, beggars, and paupers, who wander from village to village throughout the State. The streets of New York became thronged with this ragged, needy crowd; they filled all the station-houses and lodging-places provided by private charity, and overflowed into the island almshouses. Street-begging, to the point of importunity, became a custom. Ladies were robbed, even on their own doorsteps, by these mendicants. Petty offences, such as thieving and drunkenness, increased. One of the free lodgings in the upper part of the city, established by the Commissioners of Charities, became a public nuisance from its rowdyism and criminality.

'Nor would these paupers work. On one occasion the almshouse authorities were discharging a band of able-bodied

[1] *Journal of Social Science* (Hurd & Houghton, New York), No. vi. p. 75.

paupers, and, having need of some light out-door labour on the island, they offered these men what is thought good country wages—that is, $15 per month and board. They unanimously refused, preferring the free lodgings and free lunches of the city.

'But with these "tramps" came another and more respectable throng hurrying towards this "feast of charity"—honest and hard-working labouring men from every part of the neighbouring country. Farms in the interior of New York were left stripped of labourers, though the farmers offered good wages. Working men came from as far away as Pittsburg and Boston; partly, no doubt, to see the sights of New York, but hoping also for aid from public and private charities. In some cases young men were arrested in criminal houses who made their head-quarters in these soup-kitchens or relief-houses, and then sallied out to enjoy the criminal indulgences of the city.

'The pauperising influences, however, of this indiscriminate charity reached beyond these classes. Poor families abandoned steady industry, got their meals at the soup-kitchens, and spent the day in going from one charitable organisation to another. Those experienced with this class report that such people acquire a "Micawber" habit of depending on chances, and seldom return to constant work again. Instances were known of families taking their meals from the Relief Association and spending the money set aside for this daily in liquor, so that in the poorest quarters the liquor trade was never so prosperous.

'A singular effect also was produced on the class of homeless girls. Many avoided the houses where charity was connected with work, and obtained their meals at the free-lunch places, and then lodged in the low, cheap lodging-houses, where their habits were uncontrolled, and they could wander the streets at night. Many were thus enticed into ruin.'

The state of things here portrayed shows that there is danger of fostering pauperism in the great cities by an unwise distribution of alms from public or private funds. But there is little evidence that the poor-law administration, even in these cities, is justly chargeable with thus increasing the number of the public poor. This has sometimes been the case, no doubt, but not often; and any figures are to be greatly distrusted which seem to prove that pauperism has been a great or a growing evil in any portion of the United States for any considerable period. Thus Professor Fawcett, in a recent work. mentions the city of Philadelphia as an example of fast-growing pauperism in America, because, as he says, that city had, in

1869, no less than 9,000 in-door paupers during the year, and 110,000 out-door paupers. These figures are much exaggerated. The population of Philadelphia, June 1, 1870, was 674,022; in October, 1871, it was no less than 700,000. Now, on October 21, 1871, there were 3,219 in-door paupers, and during the four weeks ending with that date the whole number of persons receiving out-door relief had been only 2,982. The number in receipt of out-door relief at any one time during those four weeks did not, probably, exceed 2,500; so that the whole number of paupers of both classes, three years ago, was no more than 4,700, or 1 in 150 of the whole population. The total cost of the in-door poor in 1869–70 was $402,343, and of the out-door poor less than a fourth part as much, or $86,003; the total outlay for paupers being $488,346, or in English gold about 80,000*l.*, of which only 14,000*l.* was distributed as out-door relief. Therefore Professor Fawcett's 110,000 out-door paupers must have been put off with less than two-and-sixpence a-piece for the whole twelve months. In truth, this 110,000 includes relief granted many different times to the same person. Probably the out-door poor of Philadelphia for a year do not exceed 15,000, and are never more than 8,000 at any one time. The in-door poor during the year number about 9,000, probably, and of these not more than 4,000 are in the Blockley Almshouse at any one time. More than half of both classes are of foreign birth or parentage, though less than a third part of the 700,000 people of Philadelphia are of foreign birth.

In 1872, two years later than the period mentioned by Professor Fawcett, the cost of supporting the in-door poor of Philadelphia had fallen to $330,000, while about $113,000 was expended for out-door relief, the net cost of the whole being but $407,000, or something more than fifty cents to each inhabitant. In the city of New York the cost is more than one dollar to each inhabitant; in Boston it was, in 1873, about $320,000, of which something less than one-fourth was for out-door relief. This includes the cost of supporting the State paupers from Boston, and is an average of about one dollar for each inhabitant. It is true that in all the United States, although the number of paupers has not much increased, the expenditure for the poor has been largely augmented since 1860, partly in consequence of the inflation of the currency during and since the civil war, and partly by reason of a better treatment of the public poor. The census report for 1870, as compared with that of 1860, shows this increase of expenditure in some degree. The 'annual cost for support,'

which includes also the payments for out-door relief, is given in 1870 (for the year 1869), in the six New England States, as $2,180,496, or about 360,000*l.* in English gold. In 1860 the same cost was given as $1,249,913, or 250,000*l.* in English gold, for the year 1859. For neither year is the full amount reported; in 1859 the actual pauper expenditure in all New England must have been at least $1,500,000, (300,000*l.*), while in 1869 it was certainly more than $2,450,000 (400,000*l.*), or an average of nearly three shillings sterling for every inhabitant of New England, which is more than the English poor rates will average for the whole population of the kingdom. It follows, therefore, that the cost of relieving the poor in New England is almost as great for the whole class who are not in receipt of relief as it is in Great Britain; and thus we have the paradox, that profuse public almsgiving, which in England is held to foster pauperism, in New England has the effect to diminish it. Of the fact that there are fewer paupers in all New England than there were in 1860, we have ample evidence.

But lest any should believe, at the suggestion of Professor Fawcett or any other writer, that pauperism infests America as it does Great Britain, let us compare New England, as a whole, with Scotland and with Ireland. Scotland, with a smaller population than New England, has many more paupers, and those more permanent. On the 14th of May, 1869, Scotland, with an estimated population of 3,200,000, had 80,334 persons registered as paupers, with nearly as many more dependent on them; while on the 1st of June, 1870, New England, with a population of almost 3,500,000, had, including dependents, less than 30,000 persons registered as paupers. Of the Scotch paupers at the date given, about 9,000 were in-door paupers, of whom about 6,000 were pauper lunatics; in New England, a year later, while the number of in-door paupers was nearly 15,000, the pauper lunatics did not exceed 3,600. In Ireland, on the 14th of May, 1869, the whole number of registered paupers was 71,442, of whom 49,825 were in workhouses, and 21,617 were receiving out-door relief. The population of Ireland being then something more than 5,500,000, the proportion of paupers to the whole number was about 1 to 77, while in New England it was no more than 1 in 116; in Scotland, according to Professor Fawcett, it was about 1 in 23. In England and Wales, the 'mean number at one time in receipt of relief,' during the year 1869, was 1,018,140, and the population being then estimated at 21,760,000, the paupers at a given date were about 1 in 20. Judged merely by numbers on a given day, pauperism

in New England is about one-sixth as common as in England, about one-fifth as common as in Scotland, and about two-thirds as common as in Ireland; while it is certain that the degree and quality of pauperism in New England are much less dismal than in either of the three kingdoms. And with the exception of the States of New York and Pennsylvania, there is no part of the United States where the number of paupers is so great, in proportion to the whole population, as in New England.[1]

The chief causes of the greater prevalence of public poverty in New England than in the more Western States are, the length of time it has been inhabited, the comparative density of the population (for pauperism delights in crowded cities), and the great influx of foreign emigration, chiefly from Ireland and from Canada, within the past forty years. Undoubtedly, also, the more abundant provision for the public poor somewhat increases their reported numbers, for there is no section of the country which has so many almshouses, or where the sentiment and the system of out-door relief is so general and far-reaching. The 3,500,000 persons now living in New England inhabit about 1,500 towns and cities, and almost every one of the 1,500 has its overseer or overseers of the poor. Generally there are three overseers in each town, but in the cities from three to twelve; they are chosen yearly by popular vote, but in some cities for three years, and by the city government, as in Boston. Oftentimes the same overseer is re-elected for ten, twenty, or thirty years, in the country towns, and other town offices are united with this of caring for the poor, particularly those of 'selectmen' and 'assessor.'[2]

It is only in Massachusetts and Rhode Island that the number of almshouses is annually reported. In Massachusetts, 220 of the 340 towns and cities have almshouses; in Rhode Island 28 out of the 36. In New Hampshire there may be 100 town almshouses, besides 10 maintained in the several counties at the county charge. In Connecticut there are per-

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[1] By the Census of 1870, Massachusetts contained nearly half the whole population of New England, and is increasing rapidly in numbers, while Maine and New Hampshire are slowly declining in population. The other three States belonging to New England—Vermont, Rhode Island, and Connecticut—are gaining in numbers, but more slowly than Massachusetts. The whole area of these six States is 65,000 square miles; their population in 1870 was 3,487,924. Massachusetts alone, with an area of 7,800 square miles, had a population of 1,457,351, which has now increased to nearly 1,600,000, and shows a density to the square mile of 200—nearly equal to the average of European countries of the highest civilisation.

[2] New England may be compared with Scotland, which it slightly exceeds in population; its industry, like that of Scotland, is divided between agriculture, manufacture, commerce, and fishery; its area is greater, but the inhabited portions of the two regions are about the same in extent.

haps 100 almshouses, in Maine 150, and in Vermont 75, making in all New England an aggregate of 675 town and city almshouses, in which are maintained perhaps an average of 9,000 paupers. The State pauper establishments of Massachusetts maintain an average of about 1,700 inmates; the State workhouse and asylum of Rhode Island maintain about 400 paupers; and the ten county almshouses of New Hampshire (which correspond to the Union workhouses of England) maintain an average of about 700 inmates; so that the average number of in-door paupers supported in almshouses is less than 12,000 in all New England. The other three or four thousand in-door paupers are supported in the State lunatic hospitals (of which there are three in Massachusetts and one each in Maine, New Hampshire, Vermont, and Connecticut); in county lunatic asylums or private asylums (of which there are five in New England); in public hospitals for invalids, or in private families, at the public expense. The almshouses of all kinds provide for at least two and a half million of the New England people, or three-fourths of the whole population, being located in the cities and larger towns, and most numerous in the more densely populated States. It will be seen that they exceed in number the workhouses of England and Wales, and are about as many as those of all Great Britain.

It is the law and the custom in New England that all poor persons 'falling into distress,' as the legal phrase is, should be relieved at the expense of the locality where they are found, and that the place in which they have a 'lawful settlement' should reimburse this expense to the city or town incurring it. In Massachusetts also the State, and in New Hampshire the counties, reimburse the town for the cost of relieving a portion of the 'unsettled' poor, who are there removed, if fully supported, from the place of their abode to the State or county almshouse, perhaps fifty miles away. The apparent hardship of such removals has led, in Massachusetts, to frequent extensions of the Settlement Law, so as to allow more of the poor to be maintained in their own town; and it has also caused the extension of out-door relief, enabling persons who would otherwise go to an almshouse to be aided in their own families. It is not believed that this course has, in Massachusetts, where it is mainly practised, materially increased pauperism. In the States west and south of New England the number of town almshouses is comparatively small, and the poor of a whole county are brought together in one establishment, which often compels their removal from considerable distance; but here,

too, a system of local out-door relief in the townships of the county detains at home many of the poor, who are aided but a few weeks or a few months in the year. The township officers who give this aid are often called overseers of the poor, as in New England, while the managers of the county poor are called 'county superintendents,' 'poor-masters,' 'supervisors,' etc. These officers have the powers and perform the duties of the English Boards of Guardians, a title which is also found in some of the American States. Thus the officers who in the city of Philadelphia have the care of the poor are styled the 'Board of Guardians,' and the State Board of Missouri, corresponding to the Board of State Charities in New York and Massachusetts, was known by the same appellation. It is the custom in the State of New York for the county superintendents of the poor to hold a yearly conference for discussion and the comparison of opinions and experiences, and perhaps the same may be done in other States. In general, however, each local board manages its own affairs, with little consultation or co-operation with the others in its own State, and it has not been customary even for the State boards of public charities to meet in conference. Such a meeting was convened at New York last May, in connection with the Social Science Congress, and it is proposed in future to hold yearly conferences of the State boards.

The most interesting feature of the later legislation and administration in regard to public charity in America has been the establishment of these State boards already mentioned. Their powers are exceedingly varied in the different States by which they have been created, and so there has been but little uniformity in their action; but where they continue in office for a period of years, they do much to methodise the extreme irregularity and individuality of public charity. There is little reason in America to complain that grants of money from the public treasury for charitable uses are difficult to obtain; the tendency is rather towards liberal giving, and an unsystematic application of what is thus given. To some extent these State boards, representing the central authority in each State, supply the needed control of charitable appropriations, and in some States (as in Massachusetts, Rhode Island, and Pennsylvania) they have a direct share in the administration of charitable establishments or of the general system upon which these are conducted. Several of these boards have taken an interest in the education of deaf-mutes, which in America is carried on at the expense of the separate States, and in one instance (the Deaf-Mute College at Washington)

under the patronage of the national government. The latter, however, has had very little to do with public charity in any form since it closed the Freedmen's Bureau, by which, during the civil war, and for some years afterwards, the newly emancipated slaves were protected, employed, and instructed.

It may be inquired what was the effect of the civil war upon the pauperism and the public charities in the United States. Of course so great a revolution could not fail to make itself felt, and the number of public dependents has been much increased by the maimed and disabled soldiers of both armies, and by the orphan families of those slain. But such was the stimulus given to industry by the war and its results, that this natural increase has not much enlarged the list of public dependents, except as actual pensioners; that is to say, there are no more paupers now, in proportion to the whole population of the country, than there were in 1860. In many States there are even less; but it must not be forgotten that the pensions paid to soldiers and their families (some $30,000,000 a-year, or nearly 6,000,000*l.*) exceed the poor-law expenditures nearly, or quite, two to one. Were it not for these pensions, the direct outlay for the poor would no doubt be much larger than it is.

Too much stress cannot be laid on the extreme diversity of condition in respect to pauperism in the different sections of the country. What is true in Massachusetts and New York by no means holds good in the newly-settled States, or even in the old States that formerly held slaves. But the tendency of the newer States is to repeat the experience of those which have been longest inhabited, and are now most diverse and most developed in their industries. Hence we find that the newer States, following the example of the older provinces before the Revolution, are making their laws of pauper settlement and their system of poor-law relief more strict and more complicated, while in the older States the former strictness has been greatly relaxed. In all parts of the country great pains are taken to avoid the pauperising of children by allowing them to associate with the adult poor, and in Massachusetts a special bureau has been created, under the direction of the Board of State Charities, for taking the poor children and the less hardened young offenders and placing them in good families, where they may find, and do find, a true home. The New York Board of Charities has for some years been labouring in the same direction, and has accomplished much. Quite as much has been done, however, by a private charitable society in New York City (the Children's Aid Society), which expends more than 30,000*l.* yearly in teaching and distributing among

rural communities the street arabs of New York. In the State of Massachusetts the Board of Charities has under its oversight an average of perhaps 1,200 children, mostly boys, placed in New England families, and growing up to be good citizens. It has also encouraged the boarding out of foundling and motherless infants, the number of whom is now quite large in Massachusetts, and much greater in Philadelphia and New York.

The insane of all classes, and especially those maintained at public expense, are increasing in number in America, as they are in England and Scotland, and in nearly every State the lunatic hospitals, asylums, and wards of almshouses for insane paupers are crowded with inmates. Probably the new hospitals and asylums now building throughout the United States will contain, when completed, more than 10,000 lunatic patients, since the new hospitals in Massachusetts alone are intended for more than 1,000 patients, those in New York for more than 1,000, and those in Pennsylvania for more than 300. The completed hospitals and asylums for lunatics in the whole country are from 50 to 75 in number, and now contain more than 25,000 patients, perhaps 30,000. In Massachusetts, with a population of 1,600,000, the number in these hospitals and asylums at present is more than 2,200, or at the rate of one insane patient for every 725 of the inhabitants. If the whole country were provided with hospitals in this ratio, there would be more than 60,000 patients of this class. In Pennsylvania, with a population more than twice as great as that of Massachusetts, the present number of patients in lunatic hospitals and asylums is about 2,600, which would give a total in the whole country, at that rate, of about 30,000—the true total being probably a little less than this. These hospitals and asylums are maintained by Government grants, and by the payments made in behalf of patients; many of them admit certain patients without charge, and some are free to all patients residing in the State. The cost of maintaining these establishments may be roughly estimated at $4,000,000 a year, of which perhaps $2,500,000 is paid from public funds raised by taxation. This, however, is a mere conjecture, for the reports are not so made out as to enable the facts to be accurately known. The number of schools and other establishments for idiots is small, and they do not contain in all more than 1,000 inmates, whose support costs, perhaps, $250,000 a year.

In conclusion, it may be said that the poor-laws of America have the same foundation in reason and in the custom of the country that the British poor-laws have. They recognise the

right of the poor to be maintained in distress by the public authorities, if private charity and the aid of kindred are found insufficient. They have never been construed so as to give a certain weekly sum in addition to the wages received by the beneficiary; though this is undoubtedly sometimes the result of out-door relief to the few persons who receive it while at work for private employers. They apply the 'workhouse test' with more or less vigor; but there are in America scarcely any able-bodied poor, except the insane, and therefore this test is not so indispensable as in England. The poor-laws in their substance do not change much from one generation to another, although in some States the laws of settlement have been frequently modified so as to throw the burden of the pauper's support upon one locality rather than another. Although there is frequently a public outcry concerning the growth of pauperism, and although the increasing wealth and luxury of America are accompanied with some increase in the number of the extremely poor, there yet does not seem to be any good reason to apprehend that pauperism is really on the increase; in proportion, that is, to the whole population. The cost of maintaining and relieving the poor has greatly augmented, as it has done in most countries, but more in the United States than elsewhere, by reason of the abnormal condition of the currency since the civil war, by which prices have been greatly enhanced.

In regard to this additional cost, it is well to bear in mind what Mr. Goschen, the English statesman, said some years since:[1]—'The same number of paupers cost at the present day much more than twenty years ago. Several causes have contributed to this result. It cannot be denied that the more humane views which have prevailed during the last few years as to the treatment of the sick poor have added most materially to poor-law expenditure. Workhouses, originally designed mainly as a test for the able-bodied, have, especially in the large towns, been of necessity gradually transferred into infirmaries for the sick, and the higher standard for hospital accommodation has had a material effect upon the expenditure.' This explanation holds good in America, as well as in England; and in this connection it may be mentioned that the training schools for nurses, formed to imitate those established in England under the direction of Miss Nightingale, are already opened in Philadelphia, New York, Boston, and some

[1] *Twenty-Second Annual Report of the Poor-law Board* (1870), page x.

other American cities. The nurses trained in these schools will be expected, in due time, to take part in hospital and district nursing for the poor; and the pupils of the New York School, the oldest and largest in America, are now in charge of patients in a great pauper hospital (the Bellevue) in that city. In regard to workhouse nursing and other charitable labour among the sick poor, America is behind England and some other European countries; in regard to the instruction and disposal of pauper children, there is probably no nation in the world which surpasses the United States. The report on Pauperism in New York already cited thus expresses the common opinion (which is also very generally carried into practice) among the persons in America most conversant with public and private charities:—

'The true and best preventions of pauperism are a thorough and discriminating supervision of all charities, public and private; the most careful attention to the education and employment of the poor and their children; the placing of pauper children in good families, at a distance, if possible, from degrading associations; a rigid and exact system of in-door relief, accompanied with labour; the reduction of out-door relief in cities, and the encouragement of emigration to rural districts from the crowded centres of poverty and crime, which most of our large cities have now become.

'Those agencies should be especially encouraged by the public which employ house-to-house visitation, or which provide labour for the poor by transferring them to some place where work is in demand. This, of all the remedies in the United States for poverty, is the most natural and the most permanent. The honest and industrious poor, transported from a large city to a Western State, where their labour is in demand, will seldom become paupers again; will immediately add to the wealth of the country, and will bring up children who will, in all likelihood, become producers. The expenses of this method of charity, though apparently consisting largely of expenses of distribution—that is, of salaries of agents and railroad fares—are in reality less than those of any other method, as the person relieved is entirely removed from the community which is in distress, and seldom becomes chargeable again upon it, while he immediately adds to the wealth of the country.'

The Charity Organisation Society; its Objects and Mode of Operation.[1] By C. B. P. Bosanquet.

THE Charity Organisation Society was established on its present basis in 1869, with a view to bringing about co-operation between the administrators of charitable relief and the Poor-law authorities, and amongst the various Charities, and to rendering charitable relief effectual towards its main object—the cure, as distinguished from the mere alleviation, of distress.

Up to that time there had been very little co-operation or recognised division of labour between different agencies; the Guardians had paid little attention to what voluntary charity was doing, unless it were to withdraw or diminish out-relief on the mere chance of charitable friends, whose visits the relieving officer had heard of, contributing enough to keep the applicant out of the workhouse; whilst visitors distributed the comparatively small funds entrusted to them according to the apparent needs of the cases that came under their notice, with very little regard to the much larger relief that was being given by the Poor-law. Still less was known in most cases by the representatives of charities of the action of other charities; they were often in the hands of members of different religious denominations; in some cases their existence was not generally known, in others the officers were unacquainted with each other, and had no easy means of communication.

A similar want was felt by charitable individuals. If a person was appealed to for relief either in the street or at his own house, it was often difficult for him even to verify the truth of the statement made, and it was still more difficult for him to ascertain whether the case was already being assisted, or whether there was any agency to which it could with advantage be referred.

This state of things not only led to overlapping and waste of relief, and held out to the poor a premium on deceit, but discouraged effectual assistance. Charitable persons got into the habit of giving quite inadequate aid and of declining to accept any responsibility in dealing with cases, because of the probability of their being in receipt of relief from other quarters. Hence a comparatively large amount came to be distributed in pauperising doles, whilst it was difficult to obtain a large sum, such as 5*l.*, or even 1*l.*, for any one case, however

[1] See *Transactions*, 1873, p. 588.

probable it might be that such a gift would restore a family to a position of independence.

The great size of London and the number of its local as well as general charitable agencies made it obvious that no sufficient effect would be produced by an ordinary society working from a single centre. The population of London is larger than that of Scotland, and several of its thirty unions and Poor-law parishes contain populations as numerous as those of any after the five largest English cities,[1] it was therefore decided that Poor-law boundaries should, as far as possible, be followed, and that at least one Committee, with an office and a paid agent, should be established for every district which had a Board of Guardians. It was also decided that, in order to obtain the advantages of local self-government, the chief responsibility for raising and expending funds, and for dealing with individual cases of distress, should rest with the Committee of the district, whilst matters in which it was necessary that the Society should act as one body should be managed by a representative Council.

It will be convenient to speak first of the functions of the District Committees, then of those of the Council.

I. The first District Committee (that for the parish of St. Marylebone) opened its office in October, 1869, and there are now thirty-five Committees with thirty-nine offices, the area of the operations of which is (with some slight exceptions) co-extensive with the Metropolitan Poor-law district.[2] The wish of the Society is that each Committee should include representatives of the local Board of Guardians and of all the principal local charities, and should so be a common meeting-point for the persons in the district most anxious to benefit the poor. In practice it is of course necessary to get workers wherever they can be found, and where representatives of the charities are unable, from want of time or other reasons, to attend the

[1] The census of 1871 gave populations as follows:—Parish of St. Pancras, 221,465; parish of Islington, 213,778; parish of Lambeth, 208,342; union of Holborn, 160,213; parish of St. Marylebone, 159,254; and union of St. George's. Hanover Square (including St. Margaret's and St. John's, Westminster), 155,936. Sheffield at the same date ranked fifth among English towns, excluding London, with a population of 239,946, whilst Bristol, Bradford, and Newcastle-on-Tyne followed with populations of 182,552, 145,830, and 128,443.

[2] The Metropolitan Poor-Law District extends from Fulham and Wandsworth in the west to Poplar and Woolwich in the east, and consists, as has been said, of thirty divisions, each with its board of guardians. The difference in number between the poor-law divisions and the organisation districts is due, on the one hand, to its having been found necessary to have more than one committee in several of the large suburban divisions, and, on the other, to two committees in East London still taking charge of two poor-law divisions each. A list of the Committees and their offices will be found at the end of this pamphlet.

Committee, the Hon. Secretary has to make the best arrangement he can for keeping up necessary communication with them.

It was thought at one time that it would be found possible to keep registers at the offices giving the names of the persons who were receiving relief from the different agencies and the amounts given to them. Little progress has been made in this direction, as experience has shown that it is both more difficult to accomplish and less useful than was anticipated. The smallness of the amounts most commonly given greatly increases the trouble both of those from whom the information comes and of those who have to copy it out, and at the same time renders it of but little value. Such a register is insufficient also for office purposes from its information being always more or less after date. When the case of an applicant for assistance is under consideration it is necessary to ascertain what assistance he is receiving at the present time, and this can only be learnt with accuracy by special inquiry. A register is chiefly useful for indicating past mistakes, and in proportion as the various agencies learn to give more liberally, and to charge themselves boldly with the full responsibility of treating such cases as they respectively undertake (instead of only supplementing assistance given by others), it will become both easier to keep and more useful.

The Committees find by experience that though a well considered method of action, based on principles of general application and involving accurate records, is essential to permanent usefulness, the work of organisation must be begun by personal communication, having reference to individual applicants, and by careful inquiry into and treatment of all cases of distress that are brought to their notice. Their offices are in fact inquiry offices, at the service alike of the poor who need assistance and of those who desire to assist them.

The relations of the Society with the Poor-law illustrate its working. The aim of the Society is to bring about a division of work between charity and the Poor-law, on the principle that charity should direct its efforts primarily to assisting those whose character and circumstances render it probable that their position can be effectually and permanently improved, and should for the most part leave those whose distress, either from their own habits or from the nature of the case, does not admit of cure, to the relief provided for them by law.[1] The Committees

[1] It is an essential difference between charity and the poor-law that the former

(unless under some very exceptional circumstances) do not supplement parish relief, as supplementation has an inevitable tendency to relieve the Poor-law authorities of responsibility, and to diminish the allowances which they give. It is plain that the Society will do more good in the long run by urging the proper agency to do its own work thoroughly than by attempting directly to supply deficiencies. Friendly communication is kept up in several ways with the administrators of the Poor-law. The Local Government Board cordially recognises the Society, and gives fair consideration to any suggestions made to it by the Council. The Committees have for the most part members of the Local Boards of Guardians amongst their workers, and have in many cases induced members of their own body to join the Boards who would never have thought of offering themselves for election, had they not had their attention drawn to the usefulness of the office whilst serving on the Committees. There is also regular communication between the charity agent of the Committee and the relieving officers, for it is an invariable rule that every case which comes before a Committee is brought under the notice of the relieving officer in order that he may say whether the persons in question are receiving parish relief or are in any way known to him. These relations lead to a not infrequent exchange of cases which is advantageous to all parties, and also to a greater consistency and boldness of action on the part both of the Poor-law and Charity, by which the honest poor will gain, even though it be accompanied by a considerable diminution of the number of cases in which Poor-law out-relief is given. Most of the

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can direct its energies to preventive and remedial action. As the poor-law is bound to give necessary assistance to *all destitute* persons, charity is only doing the work of the law if it takes up such cases without special reason. In the case of the persons spoken of above 'whose character and circumstances render it probable that their position can be effectually and permanently improved,' this special reason is found in their need of such preventive or remedial action as has been referred to. If they are receiving poor-law relief, charity may be able by a judicious loan or grant to restore them to independence, when it would be illegal for the guardians to try such an experiment; and, if they are not receiving it, the interposition of charity at the right moment may save them from having to apply for it. It is necessary to leave persons of incorrigibly bad character to the poor-law, (1) because assistance is in most cases thrown away on them; (2) because assisting them tends to encourage misconduct. The latter reason applies to persons of improvident habits as much as to those who have misconducted themselves in other ways. Chronic cases, even though deserving, are left to the poor-law on a somewhat different ground, viz.:—that no assistance short of a pension will effectually meet their requirements, and that such assistance is outside the scope of a subscription charity; when an individual or a special charity is prepared to give it, the Committees gladly facilitate such an arrangement.

pauperising influence of the Poor-law has been due to its giving insufficient out-relief to many cases rather than adequate out-relief to a few, and these carefully selected on principles known to the poor.

The relations of the Committees with the Charities are so various that they cannot be entered on in detail. It is, of course, with the Charities that relieve the poor at their own homes, or at any rate without taking them into asylums, that the Committees are most concerned; but even among these each charity differs from its neighbour, and has to be differently treated. Communication takes place with each of them when cases under investigation seem likely to be known to them or are suitable for reference to them. With them, as with the Poor-law, the influence of the Society is exercised in favour of giving adequate relief to a few rather than dole-relief to many, and District Visiting Societies (which from their systematic and territorial character are the most important section of the charities that relieve the poor at their homes) have in some cases so far accepted this view as to place the responsibility of giving relief in the hands of a small Committee instead of entrusting it to individual visitors.[1]

It is a first principle with the Society to work purely in the public interest, reserving no privileges for subscribers, and taking equal pains to obtain suitable assistance for cases of distress, in whatever way they may have come under its notice. Sheets of tickets, giving the address of the offices and the hours at which they are open, are distributed gratuitously, to facilitate reference to them.[2] During the hours for which an office is open an officer is in attendance to take down the cases of applicants, and to furnish information to persons interested in charitable matters. The Committees are desirous to make it as easy as possible for the public to use them, and

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[1] The mode in which this is carried out in a sub-district of Marylebone was minutely described by Miss Octavia Hill in 'Macmillan's Magazine' for October 1872, and is referred to in a report made by her to Mr. Stansfeld, which is printed in the Appendix to the Third Report of the Local Government Board, 1874. The same object has been attained in several of the parishes of the St. George's (Hanover Square) Union, by the establishment of 'Parochial Councils of Charity.' The alteration in question, after the unpleasantness incidental to a change of system has been got over, greatly improves the relations between visitors and visited.

[2] Tickets with the address of the local office can be obtained at the offices of the district committees, and a general ticket with the addresses of all the offices can be had at the central office, 15 Buckingham Street, Adelphi.

any person legitimately interested in a case of alleged distress can have information about it sent to him by asking for it. If the person inquired about resides in London, the inquiry will be made by the committee in whose district he or she resides, but the request can be addressed to any office of the Society. If the person inquired about is homeless he can be sent to any district office (but not to the central office), and his case will be investigated like that of a resident, if he is willing to fall in with an arrangement for remaining within reach whilst the necessary inquiries are made. If the person inquired about resides outside the Metropolitan Poor-law area, the central office investigates the circumstances by post or otherwise, according to the nature of the case.

The tickets of the Society are of course often refused, especially by street beggars; the Society, therefore, recommends that if a beggar's story is at all plausible, his name and address should be taken down and sent to the nearest office. The statements of urgent need made by beggars are so invariably false that no one should let himself be induced to give money to a beggar without such a reference.

When information is desired about a person of whom the inquirer has some knowledge, it is, of course, an advantage to the district committee to have such information as he possesses furnished to them.

When the statement of the distressed person as to his position and antecedents has been verified by the paid officer of the district committee, or some other competent person, and such further inquiries have been made as may seem necessary, the case is brought before the committee or a sub-committee, that they may decide what can be done. Some cases are dismissed as not suitable for, or not admitting of, charitable assistance, others are recommended to appropriate relief agencies or to individuals, and others are assisted by the Committees themselves.

Theoretically it is not essential to the plan of the Society that the Committees should relieve, but it is found necessary in practice that there should be some supplementary agency to take up cases which existing relief agencies cannot deal with effectually, and this is best done by the Committees. Even in the richer parts of London there are sections in which it is very difficult to get assistance for the most suitable case from any charitable source, and even in the sections which are well supplied with agencies it is often difficult to get effectual relief for a case which needs liberal assistance. The Committees

are therefore prepared to give assistance themselves when they have the necessary funds, but the work of relief has so strong a tendency, owing to its greater interest and greater urgency, to absorb exclusive attention, that pains have to be taken to keep this from usurping the first place, and especially to prevent funds from being applied to it to the detriment of the machinery which is essential, if the Society is to carry out its original objects with efficiency.

When a loan will meet the requirements of a case, the Committees prefer giving assistance in this form. Their experience of the result of making loans in a careful and business-like way has been most satisfactory. Many persons have thus been effectually assisted, whilst the necessity of repaying the money by weekly instalments has made the aid rendered a means of training the borrowers to provident habits rather than of enervating and pauperising them. Grants of money are also made both through existing relief agencies and directly, and letters of recommendation to hospitals and convalescent homes are supplied to suitable cases, when the committee has such as are needed or can procure them. Employment is also sought for deserving persons, whom sickness or other causes have thrown out of work; several committees keep labour registers, and are thus able to help people to odd jobs, but regular work must, in the nature of things, be sought for through other channels than the office of a charitable Society. Information with reference to migration and emigration, as well as with reference to sanitary law and other matters connected with the welfare of the poor, is another form in which assistance is rendered.

II. We have still to speak of the functions of the Council. It is essential that such a federation of Committees as has been described should have a strong central body to assist any Committee that requires assistance, to preserve unity of action, and to represent the Society in Metropolitan, as distinguished from local, matters, and indeed in all cases in which it is necessary that the Society should act as one body. The Council consists primarily of representatives elected annually by the District Committees, but all chairmen and honorary secretaries of District Committees are *ex officio* members; and there are also a small number of 'additional members' elected by the Council itself, and a small number of representatives of great Metropolitan Charities.

The Council has its own offices (at 15 Buckingham Street, Adelphi) and its own officers; but its functions, as has been said, are distinct from those of the District Committees,

and it undertakes no work that falls within their scope unless at the request or with the approval of the committee concerned.

The first duty of the Council is to watch the progress of the thirty-five Committees which it has called into existence, with a view to rendering them assistance and support. When a committee becomes weak in working members, or loses its honorary secretary, it looks to the organising secretary of the Council for temporary assistance; when a committee is unable to raise sufficient funds in its own district, it applies to the Council for a grant from the District Committee Aid Fund; and when advice or information is needed, recourse is had in the same way to the Central Office. The Society aims at unity rather than uniformity. Its theory is, that so far as there is a real difference of circumstances between committees differences are allowable, but that so far as the circumstances of one committee resemble those of others, that which is best for one is best for all, and should be adopted by all. Consequently the Council has not only to devise and suggest working improvements itself, but to watch for such as are made by District Committees, and to call the attention of other Committees to them. Weekly meetings, reported in the *Charity Organisation Reporter*, visits to the committees by honorary 'District Committee Visitors,' and by the organising secretary and his assistant, and a frequent exchange of other postal and personal communications are the chief means by which the Council fulfils these functions.

The Council has also duties towards the public. The reports of all the principal metropolitan charities are procured each year, and kept at the Central Office for the use of persons desirous of referring to them; also Acts of Parliament, Reports of Parliamentary Committees, and other publications bearing on Charity and the Poor-law; and information on these subjects is furnished to all who apply for it. Though the duty of receiving applications for assistance falls exclusively to the District Committees, there is an inquiry department at the Central Office which inquires into suspicious charities, and into the cases of begging-letter and other impostors whose operations are not confined to the district of any one committee, and keeps up communications on these subjects with kindred societies at home and abroad, and, when necessary, with the police. It also falls to this department of the Central Office to make inquiries into suburban and other cases which do not lie within the district of any of the committees. In cases in which the interest of the public appears

to demand it the Council undertakes the prosecution of fraudulent charities and impostors; and it is seeking to bring about such an alteration of the law as will render it more difficult for persons to carry on so-called charities for their own benefit.

The Council has had nearly all classes of metropolitan charities under review; reports have been prepared and published with reference to the Night Refuges, the Soup-kitchens, the Public Day Nurseries, and the Voting Charities, and a standing Medical Committee has prepared rules for Provident Dispensaries, and takes all opportunities of urging that such dispensaries should be established to relieve the Medical Charities. In pursuance of that part of the plan of the Society which contemplated dealing with causes rather than symptoms of pauperism a large Special Committee was formed in 1873 to consider how the dwellings of the London poor could be improved; and after careful inquiry a report, drawn by Lord Napier and Ettrick, was presented and published, which has been of material use in drawing attention in Parliament and elsewhere to the extent of the evil, and the kind of remedy required. The great subjects of employment, migration, emigration, and the promotion of provident habits, have all been under the consideration of the Council, with regard to the bearing of each on the elevation of the poorer classes, and to the most appropriate agencies for dealing with them.

It remains only to speak of the relations of the Society to the country at large.

Whilst anxious to give their attention mainly to the great work which they have before them in London, they have always recognised the duty of giving all the assistance they can to those who are interested in similar work elsewhere, and the importance of obtaining help from them. One of the first steps that the Council took in this direction was to compile a list of all relief agencies at home and abroad which seemed likely to be able to assist one another with information.[1] A Special Committee, comprising representatives from all parts of the country, was formed in 1871, to consider the best mode of repressing vagrancy, and issued a Report calling attention to the plans adopted in different parts of the country, and their results.

A set of papers for the use of persons wishing to establish

[1] A new edition of this has recently been issued, comprising 63 Societies in Great Britain and Ireland, 49 in other parts of Europe, 3 in India, and 10 in the United States.

local Charity Organisation Associations has been prepared, and has facilitated the formation of Associations in many both of the large and small towns of Great Britain. Some of these have expressed a wish to be in recognised relationship to the London Society, and have therefore been affiliated to it; with them all friendly communication is kept up, as well as with Societies of earlier formation, but of a more or less kindred nature.

It is much to be wished that all counties would form Mendicity Associations like those which have been so successful in Dorset and Kent, and that Charity Organisation Associations could be established in all the large centres of population in connection with the county Mendicity Societies. Such a system would do much to diminish the mischiefs and increase the benefits resulting from voluntary charity.

It will be seen from what has been said that an agency which seeks to bring about a division of charitable labour on such principles as tend to the elevation instead of the pauperisation of the poor has spread itself with remarkable rapidity over the vast population of the metropolis, and into many other parts of the kingdom. It has established itself, in the metropolis at least, amongst the ordinary agencies as a necessary means of obtaining information with reference both to the charities and to applicants for assistance; and it has made it easier for thoughtful and business-like men and women to bring their ability to bear on some of the great social questions of the day. It is still, however, only at the beginning of its task, and it depends chiefly on the public whether the work can be pursued in such a way as permanently to diminish the number of those who are from time to time recipients of relief. This applies not only to pecuniary support, but even more to intelligent interest in the Society's work and readiness to co-operate with it. Such co-operation on the part of a considerable section of the community is an essential condition of success in any effort after substantial improvement either in the Poor-law or in charitable action.

The Houses of the Working Classes in Scotland, Rural and Urban.[1] By Rev. JAMES BEGG, D.D.

THE family system, being divinely appointed, lies at the foundation of every well-ordered society. Anything which renders its existence or its proper working difficult or impossible tends to undermine the whole social fabric. No scheme of social reform which does not keep this in view can ever succeed. The fact, that in Scotland about one-third of the whole population live in houses, if they can be so called, of only one apartment, demonstrates the source of many of our social evils, because of the difficulty or impossibility in all such cases of securing love of home against the temptations of the dram-shop, and of maintaining the delicacies or even the decencies of domestic life. This fact, in regard to the state of our houses, has been proved by the mode of taking the census, secured with some difficulty in regard to Scotland in 1861, but not yet adopted in regard to the other sections of the United Kingdom. In this matter of laying open the social state of the population by means of the census we are still far behind some other countries, and even some of our own colonies—particularly Victoria.

The houses of our working classes may be divided into two sections—those in the rural, and those in the urban districts.

I. The rural districts. Although considerable improvements have taken place during recent years, the state of matters is still far from satisfactory. The 'bondager system' as it is called, still exists in some parts of the border counties; the 'bothy' system is widely prevalent in certain districts; the 'farm kitchen' system obtains in other quarters; whilst the houses of the miners and colliers are sometimes very defective. All this tends to set aside or prevent the proper working of the family system, and thus not only to entail mischief on particular localities, but on the whole community.

The origin of these evils is chiefly to be found, it is to be feared, in false ideas of economy; and they will never be remedied until higher principles prevail, and until some current delusions are rooted out. It is never possible to separate the social from the moral state of man. It is never economical to do wrong, and it is less economical in the long run to ill-use men, than to ill-use cattle. In this free country espe-

[1] See *Transactions*, 1860, p. 881.

cially, we do not secure an influence for good over men by keeping or attempting to keep them in a state of physical degradation. The work will be better done, and the influence of masters increased, in proportion as servants are made reasonably comfortable and contented. We do not justify unreasonable complaints, but we cannot see why every ploughman might not have a good cottage, with two or three apartments, and a rood of land for a garden. If he were encouraged to become owner of his cottage, and if he had a cow, as in some parts of East Lothian, so much the better for all parties. In this way true patriotism and contentment would spread, and crops of healthy young ploughmen attached to their native country might grow up around every farm steading.

An able statistical argument has been lately maintained by the Registrar-General of Scotland, to prove that the lamentable and exceptional illegitimacy which prevails in certain districts of Scotland has no connection with the 'bothy system.' A statistical argument is seldom conclusive, and admitting that the grouping of facts in this case is ably done, from what we know of the circumstances we are not convinced; very far from it. Of course where an evil so great prevails there will probably be various causes at work, and the Registrar-General does not attempt himself to solve the problem. Its thorough solution is of great importance in every point of view; and as a diversity of opinion exists in regard to this and other matters, an examination of the whole case of the rural populations of Scotland by an impartial Royal Commission, and a detailed report thereon, would be of the greatest importance to the country.

At the same time it is a mistake to suppose that the condemnation of the 'bothy' system rests on the special issue referred to, in whatever way that issue is decided. The bothy system is bad in itself, and unworthy of a civilised country. What is it? It is the giving of ploughmen a hut for their residence, in which family life is impossible—sometimes a tolerably good hut—but seldom so good as the stables for the horses. In this hut three, four, or even six ploughmen reside. We have seen three beds in a very small bothy. This bothy was the residence of six strong men—two being required to sleep in each bed, whilst the portion of room still left was not much more than sufficient to allow the men to turn themselves. How either decency or private devotion was possible in such circumstances we leave others to say, whilst we will not put on record any account of some of the scenes that we have heard described by credible witnesses. We have seen the

ploughmen in another bothy come in at dinner time to their cheerless hovel—no prattling children or kindly 'wifie's smile' to welcome them. We have seen them kindle their own fire with difficulty, and make their own unvarying 'brose.' Can anyone doubt that this is an unworthy state of things, especially in a country in which such high rents are paid as in Scotland? and that there are strong temptations here to discontent and to vices of various kinds—even to use their masters' horses during the time allotted to rest, as some of them are said to do, in quest of sometimes very doubtful companionship—to steal fowls, eggs, and apples, as in the case immediately referred to they were affirmed to do, to vary their monotonous meals? But the case is still worse when married men are forced to live in these bothies, and to board their wives and children in neighbouring towns and villages, seeing them perhaps once a fortnight. This separation of husbands and wives is one of the worst features formerly attaching to the slave system, and yet it exists in Scotland. In a word, we have seen the houses of the people now in many parts of the world—we have seen the 'Uncle Tom's Cabins' of America, whilst the slave system continued—the wigwams of the Indians—the native houses in New Zealand, Ceylon, and India—but we have no hesitation in saying that we have seen bothies in Scotland worse than any of these. Whilst deeply deploring the coarse indulgencies, the immorality, and discontent which prevail in certain districts of Scotland, we are forced to admit that the people are sometimes 'more sinned against than sinning,' and that there is a loud call upon all Christian and patriotic men not merely to deplore the evils which exist, but to seek to remove their causes.

In a variety of ways we are interested in the performance of this duty. Humanity and patriotism call for its discharge; but we are equally bound to discharge it on the ground of self-interest. The whole kingdom suffers from the present rural system. Our cities suffer, since instead of being invariably supplied with a stream of healthy moral life from the rural districts, that stream is often much contaminated at its source. Our families sometimes suffer by the introduction of vitiated servants from the rural districts, although, considering the whole circumstances, it is wonderful how seldom this happens. The whole community suffers by a lowered morality ending in crime, pauperism, and lunacy, for which we require to provide at great expense. Our farmers themselves suffer by the growing scarcity and expense of good servants, the discontent which sometimes prevails, and the constant changes

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to which they are frequently subjected. The importance of all this as a practical question has been lately very much increased by the eager demand for good ploughmen and farm-labourers in all the colonies. In Australia and New Zealand, for example, a farm-labourer will get eight shillings a day. A ploughman will readily receive 50*l.* or 60*l.* a year with abundant provisions—the hours of labor also being only eight hours a day. He can easily save 40*l.* a year of this, and for that sum he will get in freehold as many acres of land; so that in a very few years by steady industry and economy he can become an independent landlord. With such a formidable competition, the landlords and farmers at home may well be stirred up to give their ploughmen and labourers every reasonable comfort.

It is a singular mistake, however, which seems to exist in some quarters, that whilst tracing many moral and social evils to the 'bothies,' intelligent social reformers are advocates of the 'farm kitchen' system as a general substitute. On the contrary, especially where many servants are employed, we believe the farm kitchen to be only an aggravation of the evil. It converts the kitchen into a bothy of the worst class, because of its being sometimes occupied by a mixture of the sexes, and hence it is productive of still more flagrant immorality. What we advocate is the family system, with good cottages and gardens, and enough of them. But whilst we believe that there is a decided connection between the houses of the people in many of the rural districts of Scotland and the fact that illegitimacy is greater there than in the urban districts, we are not blind to other causes which also operate. If this were the proper place, we could prove that the districts in which the Church has been most inefficient, and where a low tone of religion has prevailed, are, generally speaking, the very districts in which—even when other things have been equal—immorality has been prominent.

Inasmuch, however, as great ignorance prevails in the general community, and amongst people otherwise well informed on this whole subject; and there are divers and conflicting opinions abroad in regard to it, we should esteem the report of a Royal Commission, consisting of intelligent and thoroughly impartial men, after full investigation of the whole question, as of the greatest value. We scarcely know any subject to which the intelligent consideration of a Royal Commission could be more profitably applied; and, in our opinion, the Social Science Association could scarcely do anything of more importance to Scotland than petition for such a commission.

II. The urban districts. The subject of providing houses for the labouring classes in cities and urban districts has been more fully considered, and although it embraces still some very difficult problems, very great progress has lately been made. It has been ascertained beyond a doubt that overcrowding and many social and moral evils are connected; for example that the death-rate of cities bears a striking proportion to the density of the population. The natural death-rate is often found to be twice or thrice what it ought to be, and this can be traced almost invariably to overcrowding. On the ground of common humanity, therefore, there is an urgent call for opening up the crowded and pestilential areas of large cities, and securing better houses for the people. But this consideration acquires vast importance when it is remembered that an increased death-rate implies a number of other evils, and that the same districts in which there is a high rate of mortality are the very districts from which, generally speaking, our poor-houses, prisons, infirmaries, and lunatic asylums are chiefly supplied. Social neglect is not only, therefore, most mischievous in itself, but most injurious in every way to the community.

Another set of facts, however, have also been of late clearly established. The working classes in cities pass an immense amount of money through their hands, and the mass of them could easily, if they chose, become their own landlords. It appears from recent returns that whilst there is much waste, there is in the Savings Banks of the United Kingdom upwards of 40,000,000*l.* sterling, deposited no doubt chiefly by the working classes. This is a large sum; although when one considers that more is annually wasted on strong drink and tobacco, it sinks into comparative insignificance. If the working classes only understood their own duty and interest, the supplying of themselves with comfortable houses would therefore be comparatively easy. This object, moreover, will never be accomplished satisfactorily in any other way. Take the 40,000,000*l.* deposited in the Savings Banks, and consider that the average interest received for it was only 2*l.* 19*s.* 4*d.* per cent., whilst many of the same persons were no doubt paying 8*l.*, 10*l.*, or it may be even 20*l.* per cent. of interest for the houses in which they lived. The present state of matters, therefore, is far from economical, however gratifying in one respect. Of the large sum of 40,000,000*l.*, there was in the Scotch Savings Banks 4,637,427*l.*, and of this sum again there was 377,525*l.* in the county of Aberdeen, 899,694*l.* in the county of Edinburgh, 400,022*l.* in the county of Forfar, 127,299*l.* in the

county of Renfrew, and no less than 2,061,313*l.* in Lanarkshire. These are the very districts in which good houses for working men are most required. Whilst, therefore, having the greatest appreciation of Savings Banks, we cannot doubt that a still more important use of money would consist in securing comfortable dwellings to those who require them; whilst this again would result in renewed frugality. The working classes no doubt wish to have their money easily tangible, and there is some force in this; but they carry this idea to an extreme, and forget that there is nothing which tends so much to their independence and comfort as to be their own landlords, and thus to get rid of Whitsunday and Martinmas, two of the greatest enemies of working men, if from any cause they are unprepared to meet them. Besides, under a simple system of conveying heritable property, the value of houses might almost as easily be realised as money deposited in a bank.

One thing more has now been clearly established, viz. that it is almost as easy to become a landlord as to continue a tenant, and of course far more economical. This looks like a paradox, but it has been demonstrated by actual experience on a large scale, and the explanation of it is simply this. A large number of working men so ill-use their houses, and especially the plumber-work, that landlords are forced to charge very high rents in self-defence, and good tenants are thus under the necessity of paying for bad ones. On the other hand, when a man becomes owner of his own house he not only takes much care of it, and gets the advantage of his own good management and of all the improvements which he may choose to make, but he can turn a large portion of what would have been paid as rent into capital, so that by-and-bye the house becomes his own. This is easily accomplished by means of Property Investment Companies.

The Edinburgh Co-operative Building Company (Limited), of which an account is given in my 'Happy Homes for Working Men, and how to get them,' accomplishes both these objects, and has been managed entirely by working men. Its capital is 10,000*l.*, in shares of 1*l.* each. By means of this sum continually turned over it had built, in October 1872, 914 houses, of an aggregate value of 155,900*l.*, and it had paid interest upon the capital at a rate ranging from 7*l.* 10*s.* to 15*l.* per cent. per annum. On the other hand, these houses had been readily sold, chiefly to working men, and these men had been able to redeem them in fourteen years, at a rate very little exceeding the rent which they would have been paying as tenants during the same period. The houses are all self-

contained, having each from three to five apartments, with every convenience, and with a small garden. The experiment has, in the face of the greatest incredulity, been triumphantly successful, and there is no reason why the same experiment should not be repeated with success in every town in Scotland in which working men's houses are required. A co-operative company for the erection of working men's houses has lately been started also in Glasgow, and another in Dundee, which it is hoped will be successful and useful.

The grand difficulty lies in the rooted but unreasonable notion that working men should not have houses of their own, or rather that they cannot reasonably aspire to such a luxury. This idea should be exploded, and working men should be made to understand that if they avoid the publichouse, are frugal and economical, and especially if they begin in time, there is really no difficulty in their becoming their own landlords. On the other hand, all the professed patronage of working men in cities, as if they required to have amusements provided for them, and were a kind of children incapable of managing their own affairs, and requiring to have their houses provided for them by charity whilst they waste their money in noxious indulgences, should utterly cease. Beyond giving them good advice and helping them to help themselves, especially by labouring to remove obstacles which stand in their way, the interposition of the higher classes is not required, and is only mischievous. One of these difficulties is the acquisition of land in or around large cities and increasing towns, upon which workmen's houses can be erected. The removal of this difficulty is in truth a question of national importance, and in the long run, we suspect, will be only satisfactorily solved by facilitating locomotion, so that working men can have their own houses and gardens two or more miles in the country on either side of our crowded cities. This makes the taxation of cheap trains for working men impolitic, whilst, on the other hand, it makes it necessary that some clear understanding and agreement should be come to on the subject with our leading railways, who might ultimately greatly profit by the transaction. At the same time, where houses can be got near their work, men will no doubt prefer them.

From the long neglect of our urban population, and the monstrous evils which have arisen, many have settled down in the conviction that we may always expect to see great masses of wretched people and miserable houses in our towns and cities. But there is no inherent necessity for this if men only did their duty. Its existence is a reproach alike to our civili-

sation and our Christianity. The great combination of wealth, intelligence, and sound principle in large cities ought to lead, under the operation of the golden rule, to the very opposite results. Cities ought to be models of social comfort and of the highest civilisation. Until this is accomplished no Christian man should rest contented or imagine that he has discharged all his duty; whilst civil governments, if indifferent to this great interest, must be held as neglecting or imperfectly discharging one of their most important functions.

Trade-Unionism; its Limits and its Future.

By ALEXANDER TAYLOR INNES, Advocate, Edinburgh.

THE last meeting in Glasgow, in 1860, of the Association for the Promotion of Social Science, formed a landmark in the history of trade unions. The elaborate report presented to it by the committee on trade societies, and the discussions to which the report gave rise, begun as they were in this assembly and prolonged afterwards through the press, gave a strong impulse to working out the theory of the subject, and to practical legislation. Accordingly, during the intervening time, a real advance has been made in ascertaining the historical origin of these institutions, and estimating how far they are of use in the present. May it not be possible also to forecast their future? The following remarks do not pretend to do so; they merely suggest some of the considerations which may have to be taken into account by anyone who ventures upon that larger task. The relation of modern trade unions to the old crafts or guilds of the middle age is a subject which has been a good deal investigated recently, and one from which we may appropriately start. The large space which these institutions filled in the national life of great part of Europe, and not least of England and Scotland, is well known. Whether our modern benefit and trade societies actually and historically arose out of these predecessors, and whether the earlier class was in any sense developed or transmuted into the later, is a matter on which much research has been bestowed. In any case, the historical sequence is undoubted, and the comparison and contrast of the two must yield valuable results for theory. What is the fundamental fact in which the old guilds and the modern unions agree? It is this; they both spring out of that artificial state of human society known to us in political

economy as founded on the division of labour. Until that state of society had attained considerable permanence, such institutions were impossible. For crafts in the old time, and trades in the new, are alike combinations of *skilled* men. They are also, I think, or they aim at being, monopolies: but they are monopolies of skill—*i.e.*, they propose to perpetuate the separation into crafts or trades of that labour which originally was not skilled or separate, but has now become so. So much for their agreement. In what points do they differ? In one very obviously. The monopoly of the old crafts or guilds, as in our Scotch burghs, was permitted and protected by the law, and was indeed part of the policy of the country; that aimed at by the modern trade union is wholly voluntary, and is barely tolerated by the law, which indeed has only recently come to recognise trade unions as legally existing. But that is what we may call an external difference, relating rather to public policy and the privileges conferred by it. But there is a much deeper contrast in the very innermost constitution of the two associations. The old crafts or guilds embraced both masters and men; they included apprentices and journeymen along with employers; but they were especially associations of the masters, and for their benefit. The modern trade unions are associations exclusively of the men; they are constituted without the employer, and indeed in opposition to him. The modern society, like the old one, is still founded on the division of labour; as a *trade* union, it is essentially an association of skilled men; and as a trade *union*, it is, or would be, a monopoly: but it is a monopoly of skilled *labour*, as opposed to masters, to employers, and, above all, to capital. In the old days, almost every apprentice, almost every journeyman, might look forward to being himself a master; and every master was himself a man, a skilled man, a proper member of the craft. It was fit, therefore, that any guild or union which existed should include them all. But now the conditions on both sides are changed. The mass of the men who are employed have no chance of ever being masters or employers; and the masters or employers have no longer necessarily any skill in their craft. They may have skill, or they may not have it; what they must have, is capital. It is therefore no doubt with substantial accuracy that Mr. Ludlow has described capital as the 'dissolvent' of the old guilds. It was its accumulation which made it unnecessary for a master, or his son, to be a member of his guild, or even to understand his trade; and which at the same time made it still more unnecessary for the workman, (who retained his knowledge of the trade,) in order to earn

wages, to have anything to do with the guild. In short, capital came in as a new power, driving asunder what had before been united, and leaving the way open to new combinations.

The new combination is the modern trade union, consisting only of men, and intended to meet this power of capital and to deal with the question of wages. Whether the modern trade union, as opposed to the power of capital, is a justifiable thing or not, was largely discussed at the last Social Science meeting in this city; and the debate, commenced long before then, is not even yet finished. I propose wholly to omit that question for this reason. Trade unions, whether justifiable or not, were certain sooner or later to come into existence; and they have come into existence; and, in spite of the discouragement both of the law and of a great many considerations that seem to plead the sanction of political economy, they have attained huge dimensions, and at the present day, by the acknowledgment of all, play a very important part in our national life. So important a part do they play, that the question with many is, whether it is not to be an all-engrossing one, and whether the future development of a system which has already overcome all external opposition, can have any limits put to it in the future. Any limits, it seems clear, must come to it from within —from the nature of the thing itself, and the inevitable laws of industry and society. Are there any such?

The question, I think, has been brought up with special suggestiveness during the last twelve months by the state of matters in agricultural labour. Are we to have a trade union embracing even unskilled labour—the raw material of man? And if so, is not this portentous? On this subject there are some distinctions which are theoretical and may seem pedantic, and which may perhaps have no immediate value, but which it is worth while not to forget. In the first place, there is, strictly speaking, no such thing as a trade union of unskilled men—it is a sort of contradiction in terms. No doubt there may be organisations of unskilled labour; leagues smaller or larger, local or national, or international, by which working men may combine, by means of information, emigration, swift means of transit, and otherwise, to get the very highest wage that capital in any part of the world can give. Such things we shall probably see in the future, to the great advantage of all classes of mankind. For as it is the business of capital to find out labour, so it is the business of labour to find out capital; and the sooner this contest (if contest it can be called in which both sides are victorious) is broadened, equalised, systematised, and made universal, the better for the world. But it is a system which

differs essentially from that of trade unions. The latter, founded as we said upon the division of labour, seeks the perpetuation of that division, and seeks it, as we know, by a most watchful refusal to admit unskilled labour, or labour which has not acquired a sufficient degree of skill, into the circle of the trade. Trade unionism also may become international, and indeed on theory ought to do so. The old guilds and crafts were to a great extent European: the apprentice found the frontier no bar to his wandering steps. But if every trade union in Great Britain extended itself throughout Europe to-morrow, it would still remain a restriction upon labour, a restriction in the interests of a particular art, or at least of those skilled in it. However much, therefore, the two systems—the league of unskilled labour on the one hand, and the trade union on the other—may at present be mixed up together (and there may be a difficulty in determining at once to which of the two classes the league of the ploughman or the pitman belongs), the two are really and essentially distinct, and governed by different principles. And in the second place it is plain that they are not only distinct, but to a great extent opposed to each other. Trade unions are the aristocracy of labour; and although an aristocracy is not necessarily opposed in feeling to the democracy among whom it exists; although there may sometimes be between them the brotherliest feeling (as there is between the trade unions of Great Britain and the unskilled labour which seeks employment), still, in so far as the aristocracy is or desires to be a monopoly, and one which seeks its own perpetuation by means of union, there is a severance of interests which will tell in the long run. Of course there is to a certain extent this severance of interests between trade unions even among themselves; to each of these unions the members of the others are, economically, members of the public, outsiders, and mere consumers, against whom, as well as against capital, the regulations are intended to tell. But if ever such a thing as an organisation of all unskilled labour could be formed, the ultimate dissidence between it and the monopolies of skilled labour would probably come into much more prominence.

But these considerations are very remote. For one thing, an organisation of unskilled labour could never be made effective unless it embraced all countries: and it may, therefore, be very much put out of view. And the same consideration tells to some extent against the ultimate efficacy even of trade unions. But, of course, the great checks upon their operation —or the great securities against their excessive operation—

are derived from the more immediate and local reaction upon the trade concerned and the capital employed in it. Trade unionism, in its contest—or let us rather say in its negotiation —with capital, is now carried on with more intelligence, with much more watchtfulness and forethought, and with a wisdom based upon the accumulated experience of many years; and this wisdom and watchfulness, directed to the avoidance of useless collisions, find in the wisdom and fairness of employers all that in many cases is necessary for the right conclusion. But where these on either side fail, and the battle is carried on by the ruinous process of strikes and locks-out, the resulting mischief falls in the first instance, almost exclusively, upon the trade concerned. Capital, on the one hand, flows away from it in disgust; or labour does so on the other—flows away from it to another trade, or another locality, or even another country. And so things cure themselves, though in an unfortunate way, yet always at the expense of the branch of industry concerned, and with results rather advantageous than otherwise to rival trades. Now this is the *system* which has already come into existence among us. It may be a wasteful and sometimes a cruel one: but it is safe. It repairs its own losses, it balances its own defects; it is self-working and 'self-contained.' And even if we suppose that the present system were carried to its fullest development—that trade unions not only existed in every trade, but embraced every man in them (a thing not in the least likely to happen); and that to this were added (what is nearly impossible to conceive) an equally complete and all-embracing organisation of the unskilled labour of the country; even in such a case a system which is made up of internal and self-acting checks can scarcely create constitutional disturbance outside its own limits. So long as they remain *trade* unions, *i.e.* so long as labour is divided by the curious accident of form of labour into separate camps, there is a certainty that in case any one of them becomes for any length of time seriously exorbitant, the others must, like the rest of the public, become hostile to it. But long before such an experiment could be fully tried, it would be more summarily put an end to by the ruinous effects upon the branch of industry immediately concerned.

I cannot help thinking that, looking forward to the limits which the very nature of trade unions thus imposes upon their results in the future, is likely to have a wholesome effect. If some begin to suspect that they have been fearing too much from them, if others to think they have been hoping too much from them, the issue ought to be that both may turn their

attention to the right working of the system in the meantime, and especially to the avoiding of that miserable waste of time, and work, and money, and souls of men, which under it must always be possible, but the actual recurrence of which may be indefinitely prevented.

The plan which is at present being worked in Great Britain is, in a single phrase, *freedom of association*. As Mr. Frederic Harrison put it,[1] speaking of the Bill prepared by Mr. Hughes and Mr. Mundella, 'the principle on which it proceeds is that which has won a hundred triumphs, and has scarcely another field but this to win—the principle of removing State interference with industry. Leave bargains of labour to settle themselves, like all other bargains, under the law.' That is, let there be freedom to bargain, either individually or in combination with others—freedom to unite, freedom also not to unite. And it is this general principle, of freedom of industrial association, to which our law has at last wholly, or nearly wholly, given its sanction, and to which therefore the future is open. But let us remember that the future is overshadowed also by the contrary theory—a theory strong in possession, and also strong in the hearts of men. The view that it is the duty of the community as a whole, and of the Government as representing it, to take the burden upon itself of providing, or at least of insuring, work and wages for the people, is the ancient theory, and is the popular one. So long as this was applied merely under the old doctrines of paternal government and divine right, it was of little consequence for the future. The last few years in Great Britain have no doubt witnessed a decided reaction in the direction of administrative interference and regulation, but it is sure to stop an immense way on this side of opposing free industrial combination. Even abroad, where the people have a passion for being governed, the reports in 1867 to Her Majesty's Government show that recent legislation has gone in the direction of setting both workmen and employers free. That is not the side on which there is danger to freedom of trade. The danger is on the side of the workmen—of the masses—and of the future rather than the past. Yet it is no imaginary suggestion. The universal doctrine of modern times, that it is the people who are now to govern themselves, through their representatives or otherwise, must bear fruit in a country where the great mass of the people are receivers of wages, in the suggestion to them at least that Government or

[1] *Fortnightly Review*, July, 1869.

legislation should regulate trade, and do it in their interests. And this suggestion comes with a passionate emphasis from abroad. Throughout Europe, England is looked upon as the country of free trade in this respect also; and however far our doctrines have penetrated into their legislation, it seems certain that the mass of what calls itself thinking is on the other side. Our individualism, our abandonment of trade to competition of employer and employed, is the subject of contemptuous or indignant invective in every continental *café*, in every continental workshop. And the supposed opposite principle—the solidarity of the whole community, the obligation on each part to sacrifice itself for the whole, and the consequent right of the governing whole to limit the individualism of the part, and in particular its freedom of contract—has been long since enounced by those who assume to represent the working classes abroad. And the question between these two theories is the real question of the future. But it is a question which exists in the present. The discussions and votes at those congresses of workers or thinkers, which for the last two autumns we have had reported from Basle or Geneva, bring back—what appears to have emerged in the early history of the International—the contrast between the views even of our most advanced working class delegates and the ideas of these abroad. Here, we seek to raise wages; there, they seek to abolish them. Here, we want year by year a larger share of the golden eggs that drop from capital; there, they clutch at the golden goose itself, at the risk of twisting its reluctant neck. Here, our trade unions have aimed at securing the present—another shilling of wage, another half-hour of time; and the rise of the working class, sometimes helped by these associations and sometimes hindered, has been on the whole steadfast and continuous, like the slow upheaval of a continent. There, the present has always been more or less sacrificed to the future—or perhaps to the ideal; the forces evoked, deeper, but also more explosive, have found premature escape through many a revolutionary vent besides that ever-open crater of Paris. In so far as the continental theories, involving the question of the right of property and the interest in it of the whole community, come up in this country for discussion, they must be fairly met and considered at the proper time. But at the present stage of trade unionism it is important to note, that in all discussions hitherto it has based itself on the opposite and English idea of freedom of industry, freedom of contract, and freedom of association. The toleration which it has (only in this century) at last wrested from the law, has been founded

wholly upon this plea—that it rejects intimidation, and respects individual freedom. And whatever legislative result may spring from the inquiry at present proceeding under authority of the Crown, the maintenance of such an equipoise is sure to form an essential part of it.

The Restriction of the Liquor Traffic in Relation to the Diminution of Drinking, Drunkenness, and Crime, as Illustrated in the Working of Forbes Mackenzie Act. By BAILIE WILLIAM COLLINS, Glasgow.

AT a time when efforts are being made to secure a further restriction of the Liquor Traffic, more especially in the form of Sunday closing for England and Ireland, it is of importance to ascertain the results of the Forbes Mackenzie Act in Scotland. This Act became law in 1854, and its leading provisions are the following:—First, Grocers and others selling provisions to be consumed elsewhere, while still allowed to sell intoxicating liquors by retail, were not permitted to sell them to be consumed on the premises. Second, With the exception of grocers, who might open their shops at six in the morning, and hotel-keepers, who might sell at any hour to lodgers and travellers needing refreshment, no one was permitted to sell intoxicating drinks before eight in the morning, nor after eleven o'clock in the evening. And third, No intoxicating drinks were to be sold throughout the entire Sabbath, except in hotels, and these only to lodgers and *bonâ fide* travellers. Though these provisions were no novelty in the liquor legislation in Scotland, as all kinds of traffic had been prohibited on the Sabbath for centuries, and the hours for closing public-houses in the evening throughout the week has been fixed by statutes passed in 1429 and 1617 respectively at nine and ten o'clock, yet we find, from the evidence of the late Captain Smart, Chief Constable of Glasgow, and others, given before the Royal Commission in 1859, that the old law was quite inoperative. Twelve o'clock was supposed to be the nominal hour for closing, and in many places no particular hour was recognised. During such times as the Fair in Glasgow, the licensed houses were open night and day throughout the entire week. There were in Glasgow certain local regulations founded on the Home Drummond Act, which had become law in 1828, and which provided that public-houses were not to open at unseasonable hours, which was construed to mean twelve o'clock at night. The Magistrates of Glasgow, and the Justices of the Peace for

the Lower Ward of Lanarkshire, in 1850, four years previous to the passing of Forbes Mackenzie Act, granted licenses on the express condition that no drink was to be sold on Sabbath, and that the public-houses should shut at eleven o'clock at night throughout the week, but as the Supreme Court cancelled this regulation at the instance of one of the licensed parties, the resolution was never enforced. The inhabitants of Edinburgh obtained, in 1848, a local enactment for themselves, which imposed penalties on publicans selling after eleven o'clock at night and during certain hours on Sabbath; but this Act, though it wrought well, was interpreted so as to allow large hotels and taverns to keep open after the specified hours, it did not confer that amount of benefit that a more general enforcement would have done. And though a number of publicans in cities closed at eleven o'clock at night, it can be laid down as a general rule that no definite hour for closing was observed throughout Scotland prior to 1854, when Forbes Mackenzie Act became law. The enforcement of its leading provisions thus imposed great restrictions on the liquor traffic, and it is the object of the present paper to show that these restrictions have diminished the consumption of intoxicating liquor, and reduced the amount of drunkenness and crime.

It is not unusual for many, in view of the increasing consumption of intoxicating liquor, to assert that restrictions imposed on the traffic have not diminished the sale of liquor, or the number of cases of drunkenness. It can, however, be shown, from reliable statistics, that a very marked reduction took place after the enforcement of the Act, which we will present in detail. 1st, There has been a decrease in the consumption of intoxicating liquors through the operation of Forbes Mackenzie Act, and we adduce proof from the Government returns. In the five years ending 1853, the consumption of spirits in Scotland amounted to 36,039,712 gallons. In the five years ending 1858, the number of gallons was 29,079,188, being a decrease in the course of the five years after the enforcement of the Act of 6,960,524 gallons, or an annual decrease of 1,392,104 gallons. In the five years ending 1863, we have a consumption of 25,089,168 gallons, a further decrease of 3,990,020 gallons. In the five years ending 1868, the consumption was 25,947,397 gallons, an increase of 858,229 gallons. In the five years ending 1873, the consumption rose to 29,744,111 gallons, an increase of 3,797,714 gallons. Now, while there has been an increase of consumption during the last five years, due, by general consent, to the extraordinary prosperity of the country and the increased leisure hours of the

industrial classes, it is of importance to note that the consumption is not so great as in the five years preceding the passing of Forbes Mackenzie Act. There were, in fact, 6,295,601 fewer gallons consumed in the five years ending 1873, than in the five years ending 1853.

TABLE I.

SHOWING THE CONSUMPTION OF SPIRITS IN THE FIVE YEARS PREVIOUS TO THE FORBES MACKENZIE ACT.

	Gals.
1849	7,303,641
1850	7,412,187
1851	7,090,894
1852	7,437,462
1853	6,795,528
	36,039,712

TABLE II.

SHOWING THE CONSUMPTION IN THE FIVE YEARS SUCCEEDING.

	Gals.
1854	6,808,819
1855	5,370,418
1856	5,594,756
1857	5,796,706
1858	5,508,489
	29,079,188

TABLE III.

	Gals.
1859	5,638,886
1860	5,048,782
1861	4,684,313
1862	4,690,073
1863	5,027,114
	25,089,168

TABLE IV.

	Gals.
1864	5,395,615
1865	5,198,607
1866	5,462,465
1867	4,983,009
1868	4,907,701
	25,947,397

TABLE V.

	Gals.
1869	5,285,329
1870	5,501,987
1871	5,671,477
1872	6,452,831
1873	6,832,487
	29,744,111

If we take the element of population into account, we find a still greater disproportion in the quantity of intoxicating liquor consumed in all those different periods, and increased evidence as to the beneficial effects of those restrictions on the liquor traffic. For this purpose we select the three census years, 1851, 1861, and 1871, and show the consumption per head during these years. In the year 1851 the population of Scotland was 2,888,742, and the consumption of spirits was 7,090,894 gallons. In the year 1861 the population had increased to 3,062,274, and the consumption of spirits had diminished to 4,684,313 gallons. In the year 1871 the population was 3,358,613, and the consumption of spirits was 5,671,477 gallons. If the consumption in 1861 had been at the same rate per head as in 1851, it would have amounted to 7,516,906

gallons; but the actual consumption was only 4,684,313 gallons. If in 1871 the consumption had been at the same rate per head as in 1851, it would have amounted to 8,244,217 gallons—2,572,740 gallons more than the actual consumption. If in 1871 the consumption had been at the same rate per head as in 1861, it would have been 5,098,134 gallons, instead of 5,671,477 gallons, showing an increase of 573,343 gallons. Thus, though we have had in 1871 an increase over 1861, the consumption did not reach the amount consumed in 1851, which was, as we have stated, 7,090,894 gallons, and this by a smaller population and less means and leisure on the part of the working classes to spend in the public-house. It should, however, be mentioned in this connection, that from 1854 to 1861 the taxation on spirits had been gradually raised, which would co-operate with the restrictions of Forbes Mackenzie Act in diminishing consumption. The tax in 1853 was 3s. 8d. per gallon, in 1854 it rose to 4s. 8d. per gallon, in 1856 to 8s. per gallon, and in 1861 to 10*s.* per gallon, at which point it has stood up to the present time.

Amount of drunkenness and crime in the years immediately before and after the enforcement of the Act.

The connection of drinking with vicious and criminal conduct is so obvious, we at once anticipate that a decease in the consumption of intoxicating liquor will be followed by a diminution in the number of cases of drunkenness and crime. Police and parliamentary returns show that this effect was produced in the present instance, and the Royal Commission in their report especially attest to the fact. In page 12 they say—'The beneficial effect of the Act is proved by the evidence which we received as to the diminution of crime, and the change for the better in the habits of the people, immediately after the passing of the Act, when its provisions were strictly enforced, and by the tendency in an opposite direction, which in some places has followed its less rigorous enforcement during the last two years. In some towns there has been, on the part of the magistrates, great remissness in administering the law. The result seems to have been, if not an increase of crime in those places, at least the absence of the improvement witnessed elsewhere.' In the towns of Glasgow, Edinburgh, Dundee, Aberdeen, Paisley, Greenock, Leith, Perth, Arbroath, Montrose, Airdrie, Stirling, Inverness, Port Glasgow, Cupar, Ayr, and Elgin, the total number of cases of drunkenness and crime during three years, under the old law, was 145,366, while under the new law, with a larger popula-

tion, the number fell to 116,101. There was thus a decrease of 29,365 cases during these three years, without taking into calculation the subsequent increase of population. Confining our investigations on this point to Glasgow and Edinburgh as two cities in which the law has been faithfully enforced, we reach the following results:—

Total number of cases of drunkenness in Glasgow.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1851	24,019	1854	19,434
1852	23,788	1855	16,266
1853	23,841	1856	17,446
	71,648		53,146

We have thus a decrease of 18,502 cases of drunkenness in the city of Glasgow in the three years after the Act came into operation.

Drunk and incapable cases in Edinburgh.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1852	6367	1855	5014
1853	5727	1856	4970
1854	5183	1857	4874
	18,277		14.858

The decrease in the city of Edinburgh among the above class of cases was thus 3,419; and it might be noticed here that, although there is a slight increase within the last two years, the entire number does not reach to one-third of the apprehensions previous to the enforcement of the Act. The number in 1852, as stated above, was 6,367, whereas in 1873 it was 2,058. The next is a class of cases in which drunkenness and crime are combined, excluding the drunk and incapable cases who had been carried to the police office for protection, and were dismissed by the officer on duty, or brought up before the magistrate and fined.

Drunkenness and crime combined in Glasgow.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1851	13,328	1854	6787
1852	10,985	1855	6058
1853	10,659	1856	6525
	34,972		19,370

We have thus in this class of cases a diminution of 15,602.

Drunkenness and crime in Edinburgh.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1852	9360	1855	7159
1853	9533	1856	6959
1854	7968	1857	6706
	26,861		20,824

Showing a decrease of 6,037 cases.

Captain Linton, of Edinburgh, in his annual report, gives the following proportion of criminals who were drunk when apprehended:—

Drunk when apprehended in Edinburgh.

Year.	No. of Pris.	Year.	No. of Pris.
1852	3400	1855	3081
1853	4003	1856	2766
1864	3566	1857	2911
	10,969		8758

A decrease of 1,811 of this class of cases under the operation of the Act.

In the Edinburgh and Glasgow prisons the daily average of prisoners, during the three years previous to the Act, was 1,221; and the daily average, during the three subsequent years, was 864, being a decrease on the daily average in these two prisons of 357.

For further confirmation of the effect of the Public Houses Act in the diminution of crime, we turn to the Reports on Prisons in Scotland. In the five years previous to 1854 the average daily number of criminal prisoners was 14,676, and the average daily number in the succeeding five years was 11,507, a daily decrease of 3,169.

Year.	No. of Pris.	Year.	No. of Pris.
1849	3143	1854	2666
1850	2990	1855	2316
1851	2900	1856	2210
1852	2919	1857	2201
1853	2724	1858	2114
	14,676		11,507

It is worthy of notice that there is a great decrease in the number of prisoners in those years when the consumption of intoxicating liquors diminished. The consumption of spirits in the five years ending 1853 we found to be 36,039,712 gallons, whereas the consumption in the five years ending 1858

was 29,079,188 gallons. In the years preceding the enforcement of the Forbes Mackenzie Act the number of criminals was at the highest pitch throughout the prisons in Scotland. Though the number of criminals has been increasing during these last few years, it has not reached, by some hundreds, the number in the five years previous to 1854, while the population has much increased. The number of daily prisoners in the five years ending December, 1872, in the latest report issued by the Prison Board, is as follows:—

Number of Daily Prisoners in the five Years ending 1872.

Year.	Number of Prisoners.
1868	2560
1869	2690
1870	2742
1871	2617
1872	2777
	13,386

We come now to what may be characterised as the crucial test of the Forbes Mackenzie Act, viz., the effect it has had in diminishing the cases of drunkenness on the Lord's-Day. In the seventeen towns already enumerated, the cases of drunkenness on the Sabbath, during the three years immediately preceding the Act, amounted to 11,471, and in the three years subsequent to the Act the cases were only 4,299, being a decrease of 7,172, or nearly two-thirds of the total number. Selecting the results of the operation of the Act in Glasgow and Edinburgh, as affording not unfair criteria of its general effect throughout Scotland, we extract the following from the police returns of those cities:—

Sunday Drunkenness in Edinburgh.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1852	729	1855	389
1853	641	1856	436
	1370		825

Decrease of 545.

The number of persons apprehended in Edinburgh for drunkenness, between eight o'clock on the Sunday mornings and eight o'clock on the Monday mornings, is as follows:—In 1852 there were 401, in 1853 333 cases, while in 1855 and 1856 there were 82 and 119 respectively, a decrease in the latter years of 533, and during the last seven years there have been fewer cases than in any of the previous years. There is an impor-

tant point brought out in the annual report of the superintendent of police for Edinburgh, which clearly shows that while there is an increase within the last few years in the number of persons apprehended for crimes, who were drunk when they committed them, the number of persons apprehended for drunkenness on Sundays within these years has not increased. In 1852 there were 3,400 cases in which drunkenness and crime were combined. In 1873 there were 3,741, an increase of 341. The apprehensions of persons for drunkenness on the Lord's-Day were, in 1852, 729, while in 1873 there were only 153. An equally gratifying result is seen in the number of apprehensions for drunkenness between eight o'clock on the Sunday mornings and eight o'clock on the Monday mornings. In 1852 there were 401, in 1873 only 52.

Sunday Drunkenness in Glasgow.

UNDER THE OLD LAW.		UNDER THE NEW LAW.	
Year.		Year.	
1851	1525	1854	464
1852	1839	1855	481
1853	1218	1856	521
	4082		1466

The decrease here is most decided, amounting to no less than 2,616 cases.

It is important and satisfactory to find, notwithstanding the increase of drunkenness during the last three years, arising in great measure from the increased means and time at the disposal of the working classes, that Sunday drunkenness in Glasgow still maintains the relative *favourable* position it has occupied since the Act of 1854 came into operation. From a return furnished to me by Chief Constable M'Call, I find that during the week embracing the New-Year holidays, 1872-73, while the number of persons apprehended for being drunk and incapable amounted to 1,054, only 23 cases occurred on the Sunday; and in the same period, 1873 74, out of 1,105 apprehensions, only 32 were Sunday cases. Again, on the Fair week of 1873, out of 1,021 apprehensions, only 43 occurred on the Sunday; and during the Fair week of 1874 the numbers were 883 and 53 respectively, nothwithstanding that all the apprehensions from Saturday midnight till midnight on Sunday are set down as Sunday cases. Again, if we contrast the respective number of cases on Saturday and Sunday, we find the same results. Comparing the four Saturdays in October, 1873, with the four Sundays in the same month, while there were 767 apprehensions on the Saturday, or 191 each Saturday,

on the average, there were only 64 apprehensions, or an average of 16 on each Sunday. Lastly, I had the curiosity to examine for myself the records of the Central Police Office for the month of August last, being the last month I sat on the Bench in that Court, and found that out of 563 men and 362 females, in all 925 persons, taken to that single office for being drunk and incapable during that month, only 21 men and 9 women, in all 30 persons, were brought in on the whole of the five Sundays in that month—an average of 6 for each Sunday. While I was extracting the information, an old officer remarked to me, 'We have quiet Sundays now, but I can remember, before the Forbes Mackenzie Act came in, the Office went like a fair on Sundays.'

Thus it appears that, while owing to the augumenting consumption of intoxicating liquor, from the causes formerly stated, there has been during the last three years an increase in the apprehensions by the police on the days in which public-houses are kept open till eleven o'clock at night, yet it is all-important to observe that on Sunday, when the sale of intoxicating liquor is prohibited, the improvement is still maintained. We have here an incontrovertible proof of the beneficial effects of Forbes Mackenzie Act, which could be strengthened by the testimony of persons from all classes in the community. The Royal Commission, in their report on the evidence adduced to them with reference to the operations of the Act, make the following observations:—'The improvement in large towns has been most remarkable. Whereas formerly on Sunday mornings numbers of persons, in every stage of intoxication, were seen issuing from the public-houses, to the great annoyance of the respectable portion of the population on their way to the church, the streets are now quiet and orderly, and few cases of drunkenness are seen. The evidence of the police authorities proved that, while there has been a considerable diminution in the number of cases of drunkenness and disorder since the passing of the Act, the change has been more marked than on any other day of the week. Employers of labour, and workmen themselves, were unanimous in testifying to the great improvement that has taken place in the regularity of the attendance at work on Monday mornings; and many publicans examined before us expressed themselves as grateful for the existing law, regarding the cessation of business on Sunday as a boon of which they would not willingly be deprived.'

In conclusion, if all the results which were obtained by the earlier closing of public-houses on week days by Forbes

Mackenzie Act are not now maintained, it is simply because the hours at the disposal of the working classes do not now bear the same proportion to the hours at which the public-houses are open. To secure the same benefits now, under the altered circumstances, the public-houses would require to be closed as much earlier as the workshops are now generally closed, and experience has shown, in the few cases where this has been done, that the results are what might have been expected—namely, diminished drunkenness and crime.

MISCELLANEOUS.

Mr. STEPHEN MASON read a paper on 'Scotch Banking.' He said the distinguishing features of Scotch banking are its economy, safety, and success. The Scotch system was fully developed during the eighteenth century, and attained its highest point of perfection without external aid, and entirely free from State control. The business of banking and the issue of bank notes was entirely free in Scotland till 1845, when it received a severe and decided check by the passing of the Bank Act of that year, no new bank having been started since then, and a practical monopoly conferred upon the existing banks. A great part of Scotland, according to Macaulay, was as poor as Iceland now is, when the Bank of Scotland was founded in 1695, a year later than that of the Bank of England. The bank enabled the Scottish people to make the best use of their limited means, and fostered the industries of the country. It commenced to issue notes of different denominations of one pound up to one hundred pounds from its establishment, and all the other banks followed that example. Bank notes in Scotland are preferred to gold as a circulating medium, and the loss arising from bad notes has been of the most trifling nature—much less than that arising from bad and light coins. The notes were issued payable to bearer on demand, and this would appear to have been strong enough to prevent their depreciation or over-issue. Bank failures there certainly have been in Scotland; but the notorious failure of the Western Bank of Scotland, which, however, paid all its notes and its creditors to the last sixpence in full, was a greater failure in point of magnitude than all the bank failures previous to 1845 put together, causing loss to the public. Only some sixteen banks had failed in Scotland previous to 1845, whose liabilities were not paid in full

In England during the same period, where banking and issue never have been free, it is a black catalogue of failure, with lists of ruined shareholders and victimised depositors. In 1793, 100 banks failed. In 1814–15, nearly 300 went down; in 1825, another 70 succumbed. Again, from 1839 to 1844, not fewer than 82 gave way, 30 of which paid no dividend to their creditors. Private banks were numerous at one time in Scotland, but the joint-stock banks obtained the confidence of the people, and superseded all the private banks long before legislation was dreamt of. In the year 1819 there were in Scotland 11 private banks, with 15 branches, and 19 joint-stock banks, with 82 branches. In 1830, 8 private banks, 11 branches; 19 joint-stock, 134 branches. In 1845, 0 private banks, 0 branches; 20 joint-stock, 376 branches. In 1864, 13 joint-stock, 591 branches. In 1874, 11 joint-stock, 854 branches. The branch banks are scattered all over the country, nearly every village with 1,000 inhabitants having its bank. The average number of branch banks gives one for every 4,000 of the whole population of Scotland, whilst in England there is only one for every 11,000 of the population.

The reason why the development of banking has been so much greater in Scotland is entirely owing to its freedom from State control in the earlier period of its history, and the privilege of issuing bank notes. Sir Robert Peel restricted the issue of notes in 1845 to the average then required. This is now called the authorised issue, and the excess must at all times be covered with gold. The Act forbade the formation of any new bank with a right to issue notes. The result has been, after the lapse of nearly thirty years, that no new bank has been started in Scotland; nay, more, the twenty banks then existing, owing to amalgamations and failures, have been reduced to eleven in number. The aggregate capital of the whole in 1845 was 12,000,000*l.*, and the deposits held from the public 30,000,000*l.* The capital of the eleven banks is now only 9,000,000*l.*, and the deposits amount to the magnificent sum of 80,000,000*l.*, which would be largely reduced if the right of issue were withdrawn—probably one-half of the branch banks would be closed. They are kept open and maintained at present with a small outlay of capital and trifling expense; bank notes cost a small sum for printing, stamp duty, and paper, and they perform perfectly all the work required of them; but if gold to the amount of 5,000*l.* to 20,000*l.*, or notes costing as much as gold, had to be held at each office, the expense incurred would be more in many instances than the profit made upon the deposits. Consequently, they would

never be collected at all, and in all probability simply run to waste.

Thus one of the grand springs of Scottish industry would be dried up, and an institution destroyed which has done more for developing the resources of the people than any other institution in the country. Many people north of the Tweed were amazed to find the banks of England uniting, only a few months ago, in requesting the Government to stop the Scotch banks from opening offices in England, or to compel them to relinquish the issue of notes in Scotland, the grounds of complaint being the advantages possessed by the Scotch banks in having a right of issue, especially that of 1*l.* notes; but as they are not allowed to exercise the right of issue in England, they must conduct their business there either with gold, Bank of England notes, or notes of other banks, possibly those of their opponents.

The objections, therefore, at the first touch, fall to the ground. Would it not have been much more sensible to have petitioned the Government to legalise the issue of 1*l.* notes in England? I trust the time is not far distant when a revision of our monetary laws will be considered by our leading statesmen with a sincere desire to arrive at a wise solution of the many difficulties with which the question is now surrounded, before we have again to encounter the throes of another commercial crisis, with the suspension yet once more of the unlucky and unfortunate Act of 1844.

Mr. WILLIAM MEIKLE, actuary of the Glasgow Savings Bank, read a paper 'On Savings Banks, Penny Banks, and School Banks.'[1] The number of depositors in the United Kingdom at the present date was 3,024,661, who have at their credit 62,122,614*l.* The National Security Savings Bank of Glasgow had reached a degree of success exceeding that of all other Savings-Banks in the United Kingdom, the number of depositors being 88,058, and the amount of funds 2,150,108*l.* Among the causes which had contributed to its success were—1. The care taken by the directors to adapt their arrangements to the wants of the people. 2. The bank gives ample facilities, being open daily from ten to three, besides three evenings weekly. It receives from depositors sums as low as one shilling: makes no charge for pass-books, and is ready to repay the money the moment it is wanted without requiring

[1] This paper is published in pamphlet form by the National Security Savings Bank of Glasgow.

the depositor to give previous notice. A good deal of attention to the subject has led to the conviction that the notice system is injurious. Although intended to prevent depositors spending their money foolishly, it actually tends to prevent depositing altogether. In consequence of the ample facilities afforded, the bank is much frequented, and its transactions have become exceedingly numerous—419,000 in a year—which is more than double those of any other savings bank. 3. Another cause of success has been the practice of keeping the bank prominently before the public. This is done by printing and distributing, from time to time, handbills and prize essays, setting forth the duty and advantages of saving. Placards, showing the place where and the time when the bank is open, are placed in numerous workshops throughout the city, and also in many of the leading thoroughfares. The best results have followed this step. Hundreds of workmen and others who had never thought of the duty of saving, and apparently had never heard of the bank, are now flocking to it and depositing their savings. 4. A third cause of success has been the fostering and encouraging of penny banks. Since 1850 the savings bank has supplied these useful auxiliaries with form of constitution, sets of rules and handbills, pass books, ledgers, and cash-books, all ready for use and free of charge. 5. The establishment of branches throughout the city has also greatly aided the progress of the bank. The directors judged that the wants of so great a city were not met by only one place of deposit. The bank's office, although central, was yet inconveniently distant from the various localities where the people work or reside. To them the bank was 'out of sight,' and therefore 'out of mind;' and even although it were not so, a working man is unwilling to travel it may be several miles (in going and returning) in order to lodge a few shillings. Thus the distance of the bank militates strongly against small depositors—the very class for whom the banks are intended. To remedy this, the directors in 1869–72 instituted branches, one in each quarter of the city—east, west, north, and south. The branches are situated in leading thoroughfares, and in the centre of populous localities. They are wrought by alternate portions of the bank's ordinary staff; are open daily at the same hours as the head office; and give the same facilities, the same security, and the same rate of interest as the head office. Passing on to speak of penny banks, Mr. Meikle stated that these are institutions of great public utility, managed gratuitously by benevolent individuals under the superintendence of local trustees, who sign a constitution guaranteeing depositors

against loss. The savings bank receives their money weekly, and opens separate accounts for those of their depositors who have accumulated 1*l.* There are 120 such banks in Glasgow, 48 in Edinburgh, 30 in Aberdeen, 79 in Manchester, and 30 in Liverpool. The penny banks of Glasgow have 47,000 depositors, and 460,000 transactions in a year. A remarkable experiment for teaching the young to save has been introduced into the public schools of Belgium. It originated with M. Laurent, Professor of Civil Law in the University of Ghent. He shows that adults have inveterate habits of expenditure, and that the best means of causing the spirit of economy to penetrate the habits of the people is to teach it to their children, and make them practise it. This can be best accomplished in the public schools, where the managers and teachers have constant opportunities of enforcing and illustrating the advantages of saving, and where facilities can easily be afforded for carrying out the lessons of economy by means of penny banks, carried on in the schools. This has been done in Belgium with singular success. Out of 15,392 pupils in the town of Ghent no less than 13,032 are depositors in the savings bank, and have at their credit 18,512*l.*, an average of nearly 30*s.* each. The managers testify that the system has already produced a marked effect on the social and moral life of the working-classes of Ghent. The experiment is being extended to hundreds of other towns, and has created great interest throughout Belgium, also in France and this country.

Mr. R. Hill Macdonald read a paper 'On the Relationship between Commerce and the Postal System.' He reviewed the rise and progress of the Post Office in this country, showing that its development had been owing to the enterprise of commercial agencies, sometimes under the auspices and sometimes in defiance of Government. The reduction of postage from the old restrictive rates to the uniform rate of one penny, he explained, had been adopted on the distinct understanding that if the postage collected covered the expense of the Post Office Department the country would be satisfied, and not look for a surplus revenue, one of the fundamental principles laid down being that nothing could act so injuriously upon all other resources of revenue as a tax upon letters. Seeing then that of the gross revenue of 5,371,000*l.*, not less than 1,578,000*l.* (more than the gross revenue in the last year of the restrictive postage) was net revenue, that surplus must be regarded as a tax so long as a real grievance remained unredressed. The report of the Postmaster-General showed that increased facilities meant in-

creased profits, and that the field was not fully occupied, much remaining yet to be done. Towns, as regards letters posted in them for their own delivery, had derived no benefit from the adoption of the penny postage scheme, inasmuch as a penny post existed in towns long before that era. He therefore advocated a halfpenny rate for town letters, and a farthing rate for all circulars, with more frequent deliveries. He pleaded for the establishment of a Royal Commission to inquire into our postal system, thirty-six years having elapsed since the last Commission was issued, and for properly qualified persons, with adequate remuneration, being employed in this branch of the service. The importance of the return letter branch of the postal organisation was not understood by the public generally. Previous to July 1873, these branches existed only in the three metropolitan general post-offices, but on the 14th of that month one was opened in Glasgow. Upwards of four millions of undeliverable letters reached the returned letter branches of the United Kingdom in 1873. Of those that reached the Scotch branches not fewer than 37½ per cent. had been addressed to the delivery of Glasgow alone. Many of these contained valuable property and documents involving vast interests. From 24 to 48 hours were gained in every instance by their having been dealt with in Glasgow; yet, strange to say, the towns in the West of Scotland continued to send their dead letters through Glasgow to be dealt with in Edinburgh. The communities in these towns did not take advantage of privileges within their reach, probably from ignorance of their existence.

Mr. Ralph Moore read a paper on 'The Coal and Iron Trade of the West of Scotland.' The paper stated that the coal and iron trade of Scotland employs about 76,000 persons in raising coal and in raising ironstone and limestone for the manufacture of pig-iron. The Scottish coal-field, from which these minerals are raised, stretches from St. Andrews to the Irish Channel and is 1,500 yards deep. It is best developed in Lanarkshire, which, according to the Royal Commissioners' report (1871) contains over two thousand million tons of coal, and was practically entire in 1820, except what was worked to supply the local demands. There were then no public railways, the only public conveyance being the Monkland Canal. Glasgow was supplied by pits in the neighbourhood, and on the banks of the canal, while the ironworks were supplied by pits close to them, and the whole output of the country would not be a million tons of coal. After it was opened up by the Monkland Railway, and the opening of the Caledonian

Railway in 1850, additional pits were opened, and coals were sent all over the system, and shipped at Glasgow and Greenock, and the output in 1850 was four and a half million tons. From 1850 to the present time the production has increased with the extension of the railway system, and it is now ten million tons annually. The pits are various depths, from 30 to 180 fathoms, and, as a rule, not heavily watered. The coal is worked by stoop and room, and long wall method in about an equal number of cases, and only about 10 per cent. is lost in working. I estimate the rents paid to proprietors at about 330,000*l.*; wages, 2,000,000*l.*; sales, 3,000,000*l.*: capital sunk in collieries, 3,400,000*l.* Coals lately so dear are now about their ordinary price. The inability of the railway system to expand to the requirements of the late crisis was one of the causes of high prices, of which the coalmasters reaped the benefit; but the railway companies, bound down by statute and old contracts, were little benefited, indeed made a loss owing to dear coals. The Bunawe Iron Furnace, in Argyllshire, erected in 1750, is the oldest in Scotland. Its make is about 800 tons a-year, from Ulverston Hematite ore and wood charcoal procured on the spot; but iron made from claybands and coal was first made at Carron in 1760, the yearly make being 1,500 tons. Up to 1829 the production of iron in Scotland was only 29,000 tons. The discovery of the hotblast and of abundance of the Airdrie and other blackbands led to the establishment of additional ironworks at Coatbridge, and the production was 197,000 tons in 1840. The discovery of blackband in Ayrshire, Fife, and Edinburgh led to the erection of additional furnaces there, and the opening of the railway system, particularly the Caledonian, enabled coal, ironstone, and limestone to be readily and economically supplied, and in 1852 the make reached 690,000. In 1873 there were 122 out of 152 furnaces in operation, and the production was 993,000 tons, whereof Lanarkshire produced 616,000 tons. All this is hotblast iron. Not more than a third of blackband is now used in its manufacture, the remainder being clayband and hematite. The furnaces have been so improved that the average annual produce of each has risen from 6,400 tons in 1849 to 8,600 in 1872 and 8,140 in 1873. Improvements are still being made by utilising the waste gases and enlarging its capacity, whereby an economy of fuel has been attained, which, if fully established, will doubtless be adopted, and thus tend to maintain the position of the Scotch iron trade. The cost of production is less than in 1872-3, but it is not likely to be so low as formerly. Blackband is dearer, and has to be brought from

more distant localities by railway. Some of it is brought from Haddington and Fife, and even from Staffordshire. Hematite is also brought by rail from Ulverston and Whitehaven, and supplies of it come from Spain. Still, with labour at a moderate figure, there does not seem to be much need for anxiety for the future of the Scotch iron trade. As regards the coal trade. There is abundance of coal. In the Clyde valley there are 900 million tons within 1,060 feet of the surface. The question of 10 or 20 million tons per annum depends wholly on the facilities afforded by the railway system for transport throughout Scotland, and for shipment at all the ports; and it is to be hoped that equal facilities will be given to all companies to get a share, for there is plenty of work for all.

Mr. JOHN SOMERVILLE, of Lochgilphead, read a paper 'On the Cultivation of Waste Lands,' which affirmed that the reclamation of our waste lands, especially those of the Scottish Highlands, is a moral duty, and has become a political necessity. There were 6,000,000 acres in the United Kingdom capable of profitable reclamation, tens of thousands of which were situated in the Highlands, abandoned to marsh and bog. Dairy and other produce was so dear and scarce in the Highlands that it had to be imported at great cost; and labour was dear to employer and unremunerative to the labourer, from the excessive rains, &c., of the country, which cultivation would mitigate. In the midst of this undeveloped wealth the people endured pinching want. With those home advantages, during the last year we imported cereals and bread stuffs to the extent of 40,000,000*l.* sterling. The paper, after pointing out the degraded social condition of Highlanders, and the physical, social, moral, and political advantages of the reclamation of waste lands, concluded by propounding a reclamation scheme which could be carried out through the instrumentality of a Joint Stock Land Company, the objects of which are shown under the following heads:—

1. The objects of the company are to seek the abolition of the law of entail and free trade in land; meantime to purchase estates as they come into the market, divide them into assorted farms—small, middle, and large (not the cottier system), and to sell them to those willing to purchase for the purpose of developing the agricultural and piscatory resources of the country: to preserve a stalwart population, who have alike distinguished themselves for their loyalty, military prowess, and moral order.

2. To create and teach those people industry and raise them

from their present social degradation, by affording them remunerative employment; to adapt the schools in the Highlands, whereby they may acquire an education to enable them to compete successfully for army commissions and situations in the Civil Service.

3. To repress by all lawful means deer forests, to substitute sheep for deer, and break up overgrown sheep farms; to restore the balance between the agricultural and manufacturing industries, whereby the people would be again associated with the land, and the cities, gorged with population, be relieved.

4. To afford investment for the millions of idle capital, and opportunity to the amateur farmer and others to possess a few broad acres.

5. To afford the farmer of small means the opportunity of rising from the smaller to the larger holding, and the labourer of intelligence and energy of rising to the position of tenant farmer.

6. To open up the Highlands to the tourist and pent-up citizen, by affording substantial accommodation at a reasonable cost, whereby they may inhale our invigorating mountain breeze and enjoy boating, fishing, and bathing on lake and sea.

7. By purchasing large improvable estates, and selling them in small sections. From the enhanced price realised a fair dividend, with economical, honest management, might be calculated upon, notwithstanding the low interest for money invested in Highland estates; and it is presumed the income from fishing and shooting would not materially be affected.

Mr. R. A. MACFIE read a paper on 'Suggestions for Governing the Country by Working Boards.' He said municipalities, the poor, infirmaries, docks, chambers of commerce and agriculture, banks, companies and societies of every kind, all our charities and institutions, are managed by a plurality of peasons selected on account of their capableness and experience. Suppose it were proposed to dispense with the committee of the Glasgow Chamber of Commerce (or this Association), and at the annual meeting merely appoint a chairman, who should act in the name of the committee or board, without having any real committee or board to consult with. This would resemble what is done in the business of government; as, for instance, at the Board of Trade, but with the following differences. 1. The work of your Chamber of Commerce is not executive, whereas that of the Board of Trade is altogether so, requiring therefore more, not less attention. 2. The work of the Board of Trade is far more diversified than that of a Chamber of Commerce, and therefore requires

much more experience, is much more complex and difficult; but 3, the supposed chairman of the Chamber of Commerce is a merchant, or manufacturer, or shipowner, or miner, chosen on account of his known aptitude, whereas the practice of the Whigs and Tories alike is, to put at the head of the Board of Trade a man entirely distitute of practical acquaintance with the affairs he has to manage, of the interest he is to watch and promote. He has to learn his duties *ab initio* after he is appointed, and has begun to discharge them. This acquisition requires time. At first, therefore, and probably during the whole period of two or three years of his term of office, he has to be coached; he is in the hands of the permanent staff of the department.

Still illustrating the way in which the pre-eminently important business of the State is conducted by the Board of Trade, let me ask you to consider the many and various functions of that board—its province being commerce, manufactures, mines, fisheries, shipping, harbours, trade marks, copyright, gas, water, railways—not of London only, but of the kingdom, if not of the empire—and to say if the information, special knowledge and feelings of persons whose attention has been turned for years to these branches of business; and these two men, drawn from different parts of the country, meeting together to deliberate, would not impart to the administration of the department a weight and power which at present are altogether wanting? With a Board such as I have indicated as preferable, the department would be restored to its proper place in the government of the country, and its president would lift up his voice in the Cabinet with an authority that would command respect. Take as further illustration the Local Government Board and the Home Office, with their many and diversified kinds of business; would not true boards there be serviceable? Take the Post Office; its work is far more in need of a board to improve it than any railway. Take the Colonial Office; why should there not be a board to advise the Secretary of State, or the Colonies—men who have to do with and know the condition of the several parts of the Empire? Would not the Colonies like this? Would not the work be better and more satisfactorily done? It may be asked who would be suitable for such boards? My answer is men of character, experience, and weight, chiefly members of the two Houses of Parliament; some London, some provincial, some Scotch, some Irish; and as to the Colonial business, not a few of them Colonists. But it will be objected that to select Members of Parliament would be dangerous; the independence

of members would be compromised; and I may be reminded that members of the India Board are expressly by statute debarred from sitting in the House of Commons; I suppose also the House of Peers. True; but the more's the pity. India suffers much under that arrangement. There is nobody but the Secretary or Under-Secretary, as the case may be, to whom Members of the House of Commons can address interpellations. There is nobody who can there, with direct and positive knowledge, confirm or confront that single organ of Government. Yet there is in this particular case a sufficient present justification of exclusion from Parliament. The Indian Council are a paid body. To pay salaries to the members of such boards as I propose would not answer; their self-respect as well as their independence would be injuriously affected. The principle of payment is a good and better one when applied to the case of persons who are to serve the public at the cost of much time and inconvenience, and probably away from home. But the duties with which we here have to do are not much more onerous than those on service of committees of either House of Parliament, which are entirely gratuitous; and indeed they would be felt to be highly honourable, and more than honourable; they would put the selected member in this position that, while from the moment of his entering on them he enjoyed the pleasing consciousness that he is doing good and useful work to the State, his preparation and probation would be the pathway and the prelude to still higher and better service. At present, when a new Government is called to power, the selection of men and the distribution of places is very much a matter of hap-hazard; their competency to administer, and the confidence that may be reposed in them are yet unproved, and mistakes of course happen. The board system would supply a better link than now exists between Parliament and the public offices. It would call into play a vast amount of talent and power of work, as also of influence, which now lie dormant, and would tend to restore to the people the advantages of that grand reserve of strength which lies stagnant in the nobility for want of fit opening. Parliament would receive another benefit; its time, which is at present far too limited, would profit by the better division of labour. Work done in these boards would not require to be so minutely watched at St. Stephen's. I must add that, as a general rule, the presence of reporters, as in committees of Parliament, should be allowed, and all travelling expenses paid for meetings during the recess (as is done to members of committees). Let us not forget that a higher order of men, men more emi-

nent and better qualified, will be obtained if the position is one of honour, than if it is one of emolument. There are thousands of men of all ranks who would be proud to place their judgment and experience, and their time at the command of the State, as a contribution of pure patriotism, who would disdain and resolutely refuse to do so if any mercenary motive could be, however erronously, atttributed.

A paper 'On Supporting the Poor without the Assistance of Taxation,' by Captain FIELDEN, 21st Fusiliers, Aldershot, was read. The writer remarked, in the first place, that there need be no orphans to be supported by rates, as there were many more people willing to adopt orphans than there were orphans left homeless. It only required the aid of district visitors, or benevolent persons, to enlist the sympathies of the working classes and others, who had a natural tendency to distrust the very lowest of the poor. Adult paupers might be boarded out at a much less cost than that of building and maintaining a workhouse. They could assist in the household in various ways. Each village might then maintain its own poor. In towns, he thought, a good deal might be done by the extension of the nurses' home system.

Mrs. AMELIA LEWIS read a paper 'On the National Food, in combination with better Appliances for Food Preparations, and a regular Food System.' The paper declared that food is the supply of combustible material stored as latent heat in the various organic kingdoms by the powers of the sun's rays, and liberated by favourable conditions, for all food processes are nothing but combustion. There is a link of union between the combustion of metallic elements in the sun and the parsley we use in the stew on our table. The supply of human strength by food can only come through the equivalents we find in Nature to expand the chemical elements of which the human body is composed; and at the present time we cannot possibly say that we get anything like sufficient strength from these equivalents; in fact, at the present time the British nation is spending one-third too much in food, and not living well after all. But want of supply in human strength means disease, deformity, lunacy, idiocy, pauperism, &c., and the best material of the nation but half developed. Upon the way in which heat is firstly produced; secondly, stored; thirdly, disengaged; fourthly, consumed; will depend the maintaining or developing properties of food materials. If too much heat is produced, one becomes luscious; if too much is stored, plethoric; if too

much is disengaged, exhausted; if too much is consumed, wasted. If too little is produced, one is inactive; if too little is stored, weak; if too little is disengaged, lazy; if too little is consumed, over-fed. It is on proper combination, and the maintainance of a just equilibrium, that the whole human machine depends. To really do any good in the food question, we must not only point out scientifically the valuable resources, but invent such methods of their heat preparation as will improve them, and not lose an atom of their equivalent value. We must also understand in what metal utensils this heat process can best be applied—Firstly, as dry heat directing within the utensil its rays upon the substance; and, secondly, as moist heat or steam acting upon the substance, also in closed utensils. So prepared, food will do its work effectually in maintaining and developing the human race. The paper concluded by laying down a food system based on these principles.

A paper was submitted by JOSEPH P. THOMPSON, D.D., LL.D., of Berlin, formerly of New York, on 'The Question of Races in the United States.' Communism, the paper said, could hardly become a question of American society, since, notwithstanding the advance of prices, it was still comparatively easy for the poor man in America to become the owner of a bit of land, or of other property; and no property owner was found advocating the democracy of Socialism. He spoke of the negro race in the Union as the phase of the race question in the United States which presented serious difficulties, and which just now threatened the peace of society. He gave four suggestions for relieving its pressing difficulties, and paving the way for the tardy, but sure solution of time.

Ex-Bailie DAVID LEWIS, Edinburgh, read a paper on 'The Drink Traffic in Relation to Social Economy.' However unpopular the theory was in some quarters, there was, said the paper, a singular unanimity of opinion among all who had studied the question, that, according to the facilities and temptations presented by the traffic, would drinking and drunkenness be found to exist. Looking at the question in a financial point of view, the establishment of liquor shops was a positive injustice to the neighbouring proprietors, for while the landlord who obtained a license for his premises increased his own rental, it was no less true that he invariaby diminished the rental of his neighbours. With respect to the influence exerted by traffic on those engaged in it, its ruinous character was still most strikingly exhibited, as it was found that the risk of death

among them was much in excess of the average rate reckoned on by assurance companies. While pleading for the restriction of the traffic in its most rigid sense, he believed that the sale of intoxicants as a beverage was irreconcileably antagonistic to the realisation of a sober nation. Restriction could mitigate the evil, but total prohibition could alone remove it. That we were fast drifting to a trial of strength on this subject at the polling-booths of this country he firmly believed. He felt convinced that when the liquor traffic was called to answer at the bar of public opinion it must signally fail to assign any reason why, upon moral, social, or religious grounds, it should be longer tolerated to occupy a place among the institutions of our country. As the result of forty years of patient and peaceful agitation, a latent temperance sentiment already slumbered throughout the constituencies of the nation. Day by day it became more maturely developed, and when by discipline and union the organised forces of social and temperance reform were combined, Government, by the stern necessities of the case, would be constrained to allow the liquor traffic to be disposed of as the popular voice of the community should determine.

The Rev. JAMES A. JOHNSTON, of Glasgow, read a paper, 'Proposed Amendment of the License Laws,' in which, after stating the general dissatisfaction with the present law, he said that as the traffic in intoxicating drinks is nightly subjected to legal restriction, the will and well-being of the community should be paramount, and that deference should be paid to public opinion and social usage. As amendments of the present law, he proposed the abolition of the beer license; the separation of the sale of groceries from the sale of intoxicating drinks, giving five years' grace to existing license-holders; making one licensed house to 750 of the population, the ultimate maximum conferring on ratepayers to veto any new license in their respective localities; the modification of the license duty, so as to make it proportionate to the rental; the abolition of the Quarter Sessions Court of Appeal; shutting at 10 P.M. in towns and at 9 in rural districts; preventing hotels selling on Sundays except to lodgers; withholding licenses from river steamers and places of amusement; and the better enforcement of the law generally.

Mr. J. L. SELKIRK, of Glasgow, read a paper on 'The attitude of Law to the Liquor Traffic,' in which he maintained that no regulation of the traffic could, in the nature of the case, be adequate or satisfactory, and that the proper attitude of law to the traffic was prohibition.

A paper by Mrs. EMMA A. PATERSON on 'The Position of Women engaged in Handicrafts and other Industrial Pursuits,'[1] was read. After referring to the readiness always displayed by the Association to consider questions affecting the welfare and advancement of women, the writer pleaded the importance of the subject which she wished to bring forward. Whatever differences of opinion might exist as to the good or evil results of women's employment, it was evident that the withdrawal of women from the labour market was growing every year more remote. The number of wage-earning girls and women had been increasing rapidly until it had now, as shown by the last census returns, reached upwards of three millions. If the members of so large a class of the community, or a considerable proportion of them, although sober and industrious, were found to be unable to support themselves by the payment for their labour, their relation to society at large, and the causes of, and possible remedies for, their depressed condition, would be seen to deserve serious consideration and inquiry. Even if direct evidence were wanting, a knowledge of the rate of the wages of women would convince us that many of them must either partly depend on outside aid for subsistence, or suffer great hardships. In trades in which both men and women were employed, one-third of the rate of the men's wages is considered a high rate of payment for the women. In many other trades almost exclusively carried on by women, the rate of payment is lower still. Girls deriving assistance from their parents do not so acutely feel the want of higher wages, but women obliged to depend on their labour for their own support, and not unfrequently for that of children or other relatives, find their earnings insufficient, and are compelled to draw upon the poor rates or local charities to aid them—or to resort to more shameful means of obtaining money. Even assistance from parents is a form of charity which persons of an age and ability to obtain employment should not be subject to. It is often said that men are paid higher wages than women because they have to support families, but single men are never paid lower wages than married men from considerations of this kind. The difference between men's and women's wages too is so great, that although women often have a family dependent on their exertions, their wages are insufficient to properly support even one person. Out of the 879,000 widows in England and Wales it may be fairly estimated that two-thirds are of the

[1] This paper is printed in full in the *Englishwoman's Review* for January 1875. (Trübner, Ludgate Hill).

poorer class, and that a large proportion have children to provide for.

The causes commonly assigned for the low wages of women are inferiority of their work, their inability to do so much work in a given time as men can perform, and a superabundance of their labour; but statements of both manufacturers and workmen, and other evidence quoted in this paper, are sufficient to show that other causes than these must be sought for.

The reason seldom assigned for the low payment of women, although probably the soundest one, is that of the absence of trade combinations among them. To such combination as the only effective remedy for their unsatisfactory condition, it now appears to be necessary to direct the attention of women. Lest it should be objected that trade unions would lead to strikes, the fact must be pointed out that women have, without unions, often originated or taken part in strikes, and that it is now generally admitted that well-organised unions discourage and tend to diminish strikes, by affording facilities for more amicable methods of adjusting disputes. There are many other advantages of trade unions in which women have not shared, such as aid when out of work from causes of trade depression, the encouragement of good work, information as to demands for labour in different localities (the best safeguard against an over-supply of labour in any one place), travelling allowances, reduction of hours of labour, and the feeling of strength and dignity afforded by union. The disorganised condition of women, owing to which they are obliged to take any wages offered to them, makes it a matter of small surprise that working men should object to their introduction into trades. Neither employers nor the public are to blame for the underpayment of women. Employers have been known to say that they would gladly pay higher wages if there were combinations among the workers, which would prevent other employers from being enabled to obtain cheaper labour, and to so undersell the productions of the better paid workers. As to shorter hours of labour, the Factory and Workshop Acts apply only to establishments employing large number of hands. There are numerous cases in which it would be as impossible to apply such Act as it is now to prevent their frequent evasion. The united determination of the workers would be found for women, as it has been found for men, the safeguard against over-work, especially when accompanied as it must be by increased wages, rendering overtime work less tempting.

Many hard conditions affecting women's labour might also be alleviated or abolished by combination. The requirement of

money security for work given out, the forfeitures for work unjustly said to be badly done, and the occasional application of the truck system are amongst these.

The success of organisations of working women in the United States affords encouragement for the formation of such societies here. A movement has now been inagurated in London and other large centres of industries for the establishment of women's unions. In the first instance, however, working women need information, advice, and council in efforts for the improvement of their position, until they become accustomed to think and act for themselves; and there is wide scope in this work for the energies of educated women having leisure, and of all who wish to help the working classes to help themselves, and to become independent of charitable aid and of parochial relief.

Mrs. MARY CRAWSHAY read a paper on 'Domestic Service for Ladies,' in which she said there were 900,000 more women than men in Great Britain, some of whom were distressed gentlewomen; and as marriage was an impossibility for these, Mrs. Crawshaw urged on the wives of England to help their poorer sisters, by giving to them the places of upper servants in large establishments, and instanced her own experience of the benefit in such a case to the householders, from their greater cleanliness, honesty, and loyalty to those they served. She also referred to an experiment now being tried, where two ladies had taken servants' places, with a strong person attending for a few hours daily to do the roughest of the work, and the positions undertaken by the ladies were those of cook, kitchenmaid, dairymaid, lady's maid, and upper housemaid, with perfect success, no change having occurred among the female domestics, nine in number, for more than a year. The lady helps were found to require far less waiting on than ordinary upper servants, having nothing whatever done for them, except their floors scoured and grates cleaned. Mrs. Crawshay deprecated a lady taking the place of a housekeeper, without more lady helps, on account of the isolation which would make her dependent on her employer for society. She urged that ladies should make the adoption of manual work easy to indigent gentlewomen, by themselves, at any rate once or twice, doing some light household work. The paper concluded by stating that three of Mrs. Crawshay's 'helps' would be happy to accept service each in a separate household, with the view of spreading the system.

Mrs. E. M. King read a paper on 'The Science of Domestic Economy,' the object of which was to show that domestic economy could be raised into a science equal in importance with political economy, and that the domestic arts could not be rightly performed until this was done. Social economy relates to the whole field of economics, of which political and domestic economy are the two parts—political economy relating to the production and distribution of wealth; domestic economy to its distribution and consumption. The former has received the attention of great philosophers; the latter received no attention, 1st, because the domestic arts or 'duties' have been thought too simple to need the aid of science; 2ndly, because no money value has been attached to the performance of these arts. There were four ways in which women might be supported—first, in idleness by men; secondly, supported by men while they were working in their own homes; thirdly, support themselves by competing with men; fourthly, support themselves in a properly organised field of their own work. There was an ever-growing demand for a field of remunerative work for women. Why not make their own field a remunerative one? Side by side with the demand for work there was a great demand for female workers, servants. Why did not ladies who wanted work take that position? Because there was no possibility of rising from that position. Through a knowledge of domestic economy such a possibility would be created. Every woman was expected to understand the domestic arts. That expectation had kept the domestic sphere in a low state of development and prevented its rising to a higher system of organisation. Such a system would require the principles of association and division of labour, and the medium of exchange, which was money, to carry them into practice. A plan of co-operative housekeeping, or associated houses, had been in operation at Stamford Hill, which had received favourable notice. It would be well if ladies would consider the signs of the times with regard to housekeeping matters. They would see that the plan of association lay along the path of progress, and that they were proceeding towards it. The difficulties and expense of living would force on the system of living in associated houses. It depended now on women's sagacity, or women's blindness and stupidity, whether they could or would join with men in this movement, and share in its benefits and remuneration, or whether they would be entirely thrust out, and see the system of association in living proceed upon a plan suited only to masculine needs instead of family needs, themselves sharing in none of the benefits of that association, while

their own feminine homes would be left poorer, more solitary, and more hopeless.

Mr. ALEXANDER TAYLOR INNES, advocate, Edinburgh, read a paper entitled 'The Paradox in the Law of Trade Unions.'[1] The paper directed attention to the fact that the law of trade unions was on one point very peculiar. The statute of 1871, which now regulated them, provided that their purposes were no longer to be deemed unlawful, as being in restraint of trade, and that their agreements are no longer to be void or voidable; but it added that this was not to give power to any Court to enforce their agreements. The statute, therefore, which declared trade union purposes lawful, refused to enforce them. The paper pointed out that this state of the law was brought about at the request of representatives of trade unionism in England, but against the protest of the trade unions in Scotland. The position of societies, whose purely pecuniary agreements were in one breath declared lawful and at the same time forbidden to be enforced, was, he thought, anomalous, and almost paradoxical, there being no exact parallel to it in private or municipal law, and it could only be dealt with on those higher considerations of public or constitutional jurisprudence, which override all others.

A paper was presented by Messrs. CH. LIMOUSIN and DESMOULINS on the subject of 'Mons. Ménier's Idea of a Unique Taxation on Capital,' as one of the means best calculated to solve the special question, 'How can this Country best prepare itself to meet the increased Competition from the Spread of Manufacturing Industry in Europe?'

M. Ménier is, in France, the zealous, indefatigable, and eloquent supporter of a new system of taxation on capital. He sees in his system the most efficacious and equitable means to establish and assess taxes, or rather *the* tax—for M. Ménier recommends a unique taxation. He proves that his system is the one that brings less impediment to commerce and industry, and therefore favours their development in a proportion never known before.

With a view to arriving at a rigorous and really scientific definition of taxation, M. Ménier in his book studies carefully the following points:—

1. What has been, in the beginning of societies, the first conception of taxation?

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[1] This paper is printed in full in the *Law Magazine*, for April 1875.

2. What is the character of taxation according to modern public law?

3. What are the various definitions which economists have endeavoured to give to taxation itself?

4. What is the real character of taxation?

According to M. Ménier, the various definitions of taxation given by economists are all more or less far from truth. The antagonism that existed in the old legislation between the fisc and the tax-payers, between the country and its government, has been maintained in modern law, and is still extant even in political economy. The economists have persisted in considering of one side the man, the individual, the subject, the tax-payer; and on the other side the Government, the State with its ruling mission, its power over individuals; and they have placed these two elements face to face, as if they were to have opposed interests. With them the State is always the ruler of the citizens, instead of being only their own steward. They are but its tax-payers. According to such a doctrine, life is spent in an immense toll-house, citizens must give so much a head to have a right of living in the country. Impost is personal instead of being real. It is the man who pays, not the thing. The citizen remains a serf to the State.

There must be a perfect identity of interests between Government and community. M. Ménier affirms that taxation cannot be a tribute paid up by certain classes to another, as in aristocratic countries or ancient republics; that taxation cannot be the rent imposed by a master to a nation, as it is in absolute monarchies; that taxation cannot be an exchange between two antagonistic parties, the State and the people, as the interests of both of them must be quite identical.

According to M. Ménier, the nation being a collection of interests, forms a syndicate, of which the State is the manager. This syndicate consists of secondary unities, that are the counties, provinces, *départements, cantons*; these secondary unities represent, in their turn, others that are divided and subdivided.

A paper, by Mr. JAMES BORROWMAN, on 'Co-operative Distribution,' was read. In common with other social innovations, the writer said, co-operation has been well abused on the one hand and overpraised on the other. Its opponents say it is false in theory, impossible in practice, a harmless delusion, well fitted to amuse the leisure hours of working men, but utterly incapable of grappling with the great problem of human life and labour. On the other hand enthusiasts see in it a panacea for all the ills that affect humanity, a moral regenerator of society,

a practical illustration of loving our neighbours as ourselves. In reality it is simply a commercial arrangement which unites and utilises the small capital of fifty or five thousand consumers, thereby enabling them to purchase in the wholesale instead of the retail market, the store being used only as a place in which to divide the goods into the quantities required by the different members. The difference between the prices in the wholesale and retail trade range from 10 to 25 per cent.; it is this margin less working expenses, which is available as dividend, and yet the inspired oracle of 'Auld Reekie' and its humble followers, assert that no saving is possible through co-operative distribution. The writer advocated the soundness and fairness of the co-operative principle, and stated that in Scotland there were about 300 stores, with a membership of 120,000, a capital invested of 250,000*l.*, a yearly turn-over of 3,500,000*l.*, and a net profit of 150,000*l.* In England and Wales 746 stores were in successful operation, with a membership of 300,587, a share capital of 2,784,000*l.*, an annual turn-over of 11,379,000*l.*, and a net profit of 807,748. The greater portion of the capital of these societies, he added, was held by working men in receipt of small wages.

[For want of time the following papers were not read: 'On the Currency Question,' by Mr. Rigby Wason; and 'On the Re-adjustment of Local Taxation,' by Mr. Henry Eyres.]

ODD FELLOWS' LIBRARY ASSOCIATION. SAN FRANCISCO, CAL.

APPENDIX A.

REPORT TO THE CONCLUDING GENERAL MEETING OF MEMBERS AND ASSOCIATES.

THE Council have to congratulate the members of the Association on the success of the Eighteenth Annual Congress, and the second of the Association held in this city, the former one under the presidency of the late Lord Brougham, and the present under that of his Lordship in the chair. The address of the President of the Association and those of the several sections are on a footing, in point of practicability and comprehensiveness, with any that have hitherto been delivered, and they have received the hearty applause of all those present. The business of the departments has been eminently successful, the discussions have been good, and the attendance large, and in many instances crowded. The attendance at the working men's meeting numbered about 3,000, and the addresses of the Earl of Shaftesbury, the noble President, Lord Rosebery, and the other speakers, were received with acclamations of approval. The Council are much gratified at the result of this meeting, tending as it does to establish a better understanding between masters and workmen, and to create a feeling of confidence in the endeavours made by legislation to promote education and to establish a proper system of sanitary science. The thanks of the Association are eminently due to the Hon. the Lord Provost of Glasgow for the strenuous exertions he has made to promote the success of the Congress; also to the Very Rev. Principal Caird, D.D., and the Rev. Dr. Burns for preaching sermons in connection with the Congress, the former being the sermon inaugurating the proceedings.

The best thanks are also due to the Lord Provost and Corporation of Glasgow, for the use of the Corporation Buildings and the City Hall for the purposes of the Congress; to the Vice-Presidents of the Congress, the Presidents and Vice-Presidents, the Local Committees, and the Secretaries of the Departments, for their attendance and interest taken in the business of the Departments; and also to the Treasurer, the Executive Council, and Local Secretaries for their labour and exertions on behalf of the Congress; to Mr. John Burns for placing H.M.S. *Racoon* at disposal of Committee for an excursion to the Isle of Arran; to Mr. Donald Matheson, Secretary to the Reception Committee, and to the various individuals who have afforded

private hospitality to the members, and otherwise contributed to the success of the Congress; to the Directors of the Western Club, the New Club, the Junior Club, the Royal Exchange, and the Athenæum, for the privileges afforded to members attending the Congress, and to the proprietors of the various public works who in the most cordial manner opened their establishments to visitors; to the Philosophical Society of Glasgow and the Institution of Engineers of Scotland, for the use of their rooms and libraries.

The number of tickets disposed of are 1,186, and the amount of the proceeds of the sales of them 883*l.* 9*s.*, and 61 tickets have been issued to life members and members who pay in London.

JURISPRUDENCE DEPARTMENT.

International and Municipal Law Section.—The Hon. Judge Peabody, of the United States, laid upon the table of the department a copy of an Italian translation of Mr. David Dudley Field's outlines of an International Code. The thanks of the department were given to him. The first special question was:—'In what way may International Arbitration be made available to settle the disputes of Nations?' Many of the speakers considered that the most serious disputes could not easily be solved by arbitration. It was, however, thought that systems of arbitration might easily be devised, which would reduce the number of wars, though we must not soon expect to see the end of wars altogether. The second special question, 'Should Unanimity be required in Juries?' was treated in papers by Mr. William Forsyth, Q.C., M.P., and Mr. Sheriff Clark. In the discussion which followed the majority of the members present were in favour of the undesirability of unanimity in civil cases, but of the desirability of retaining unanimity in criminal and *quasi*-criminal cases. The third special question was:—'Ought the Testimony of any Persons at present excluded as Witnesses to be admitted as Evidence in our Courts of Law?' There was a decided preponderance of opinion in favour of admitting the evidence of accused persons, if tendered, in criminal cases.

The voluntary papers comprised one, 'On the Constitution of a Supreme Court of Appeal for the British Empire,' by Mr. Alexander Edward Miller, Q.C. The principal remark made upon it in discussion was, that the Court of Appeal should, if constituted, contain at least one Scotch and one Irish Judge. Papers were also read 'On the Paradox of the Law of Trade Unions,' 'Teinds, and Stipends in Scotland,' and also an account of 'The Swiss Juridical Congress at Coise,' by Mr. C. H. E. Carmichael. The question of assimilating the laws of England and Scotland was also the subject of three papers, followed by a discussion, in which mercantile law was specially mentioned as the branch in which assimilation was most desirable, and its need most urgent. It was resolved that the Council be requested to take into its consideration this question of assimilating the laws of the two countries.

Repression of Crime Section.—The first special question for discussion in this section was:—'How far is it desirable that the Industrial Schools Act should be extended to Day Industrial Feeding Schools?'

Miss Carpenter advocated the establishment of Day Industrial Schools, with power of compulsory detention for neglected children to supplement the work of School Boards, where the children shall remain at least ten hours a day on the premises—three hours being allotted to teaching, five to industrial work, and two to meals and recreation; three simple meals per diem to be supplied. The paper gave rise to an interesting debate, the section, which was numerously attended, being of opinion that the Council of the Association should take the matter up with the view of inducing the Government to initiate the necessary legislation. Mr. Serjeant Cox contributed a paper on the second special question:—'How far should Previous Convictions be taken into account on Sentencing Criminals?' Captain McCall read a paper of statistics to prove that crime in Glasgow was diminishing, notwithstanding its rapid increase of population. And Mr. John Smith, the Governor of Edinburgh Gaol, also contributed a paper on the question; and the section was of opinion that, while recent convictions should always weigh, yet if several years had elapsed since a prisoner's first conviction, and the prisoner had conducted him or her self well in the interval, the first conviction should not be taken into account at all.

On the third special question, 'Is it desirable to extend Sentences of Police Supervision to other Cases than those already provided for?' Major Brundennell Rogers contributed an exhaustive paper, arguing the avoidance of confinement in gaol if necessary restraints can be otherwise provided; and he supplied a plan which he thought fully calculated to give effect to his proposals, which were well received by the section, and it was agreed to submit the paper to the Council for consideration.

Dr. Yellowlees contributed a valuable paper, 'On the Criminal Responsibility of the Insane,' which was attentively listened to, and the section unaniniously adopted the views of Professor Gairdner, who, though in the main agreeing with Dr. Yellowlees, yet said, that while the insane were only in various degrees responsible for crime, still he thought that the insane, even as insane, should be punished for crime. Juries, he thought, should be allowed to return a verdict of guilty, but insane.

Papers were also contributed 'On the Self-Sustaining of Criminals in New Zealand,' 'On Industrial School Trades,' on 'Whether Increased Discriminate Aid absolutely is required for Discharged Prisoners to repress the Temptation of the Repetition of Crime,' 'On Local Institutions and Agencies for the Prevention of Crime and the Reformation of Criminals,' 'On the relative Increase of Wages, Drunkenness, and Crime during the last Five Years in the Central Mining District of Scotland,' 'On the necessity for Further Legislation for Mental Disorders resulting from or characterised by excessive indulgence in Alcoholic Liquors,' 'On Local Institutions and Agencies for the Prevention of Crime and the Reformation of Criminals,' 'On Criminal Offences and the Repression of Crime in England and Wales, with especial Reference to Wife Beaters and Persons guilty of other kinds of Brutal Inhumanity,' 'On the Gaol Management in the Central Provinces of India, with reference to the Housing, Classification,

Employment, and Education of Prisoners,' 'On Reformatory and Industrial Schools in India,' and 'On Proceedings in Scotland Preliminary to Committing a Prisoner for Trial.'

EDUCATION DEPARTMENT.

The discussions in this department have embraced the subjects of the higher technical and primary education.

In the first the question of extending the benefits of academical endowments was discussed in a paper of much ability by Mr. C. S. Parker, based on the Report which will shortly come before the public of the Universities Commission; and by Professor Ramsey, commenting specially on Scottish institutions. Miss D. Beale also contributed a very valuable paper on the 'University Education of Girls.' In all these the double object was fully recognised of maintaining a high standard of culture and erudition, while rendering the teaching power of the Universities widely available in the interests of general education, specially by the exercise of their influence as examining bodies, and by associating them by means of scholarships with the higher grade schools.

The question of 'Technical Education' was treated by Mr. B. Samuelson, M.P., Dr. James Bryce, and Mr. Montgomerie Neilson. The distinction between scientific, improperly so called, and technical instruction was maintained, and while it was not considered possible to adopt the latter as a part of the curriculum of our National Schools, the importance of both branches of technical instruction as an adjunct to national education was fully admitted. An important paper was also contributed by Mr. Jolly, H.M. Inspector of Schools, on the technical instruction of teachers, and the desire was expressed that the attention of the Council should be given to the promotion of endowed chairs for scientific instruction in the art of education in the Scotch and English Universities.

The third branch of the question was treated by the Rev. J. Page Hopps, Mr. William Mitchell, of Glasgow, Mr. J. F. Moss, of Sheffield; Mr. J. F. Bremner, of the Manchester, and Mr. T. Chatfeild Clarke, of the London School Boards, have also given sketches of the progress made in those cities. The necessity of extending the principle of compulsion, tempered by a wise, kindly discretion, was enforced, and in the discussion led by Mr. Cooke Taylor, H.M. Inspector of Factories, the methods of indirect compulsion, the difficulties and advantages of the half time system, the question of free schools, some aspects of the question of 'denominational' and 'secular' instruction, the necessity for general School Boards, the interests and concern of the ratepayer, and other points of much interest in this great branch of the subject, were fully discussed.

The Rev. Dr. Taylor also gave an interesting sketch of the history, progress, and principles of education in Scotland, which was followed by a paper by Mr. J. M'Clelland, and Dr. Carpenter (who touched chiefly on the sanitary aspects of the question). The Kinder Garten system was also brought to the notice of the section by Miss E. A. Manning.

The Association has also been enriched by many voluntary papers: Mrs. Amelia Lewis explained the Ritter system of teaching history and geography with much force, insisting upon the use which should be made of the faculty of association of ideas. 'High School Examinations,' by William Jack; 'Education in Bengal,' by Henry Woodrow; and other topics of much interest, were brought before the section.

HEALTH DEPARTMENT.

The first special question that engaged the attention of the Health Department was:—'What are the best Methods of Sewering Towns, and of Disposing of their Organic Refuse?' and papers on the subject were read by Dr. Andrew Fergus, and Mr. Baldwin Latham. There was a large attendance of members, and a long and animated discussion ensued, in the course of which Captain Liernur explained his Pneumatic system of removing sewage matter, which is now in operation in Amsterdam and some other towns in Holland. The question was very fully discussed, many various opinions being elicited, and it was generally felt that much had been done to increase our knowledge on this question, and to furnish valuable data for future guidance.

A large attendance of members listened with evident interest to the reading of papers by Mr. William Hope, V.C., and Mr. Cooke Taylor, on the second special question:—'What Influence has the employment of Mothers in Manufactures on Infant Mortality? and ought any and what Restrictions to be Placed on such Employment?' Mr. Hope's paper went to show that the great mortality among infants did not arise so much from the employment of mothers in manufactures as from an inadequate supply of milk diet. Mr. Cooke Taylor's paper showed that the death-rate among infants was not to any important extent, increased by the employment of mothers, and he deprecated legislative restriction on the subject. In the long discussion that ensued the department was addressed by the President, by many eminent members of the medical profession, by large employers of labour, and by two ladies, who related their experience during many years spent among the poorest of our working classes.

On the third special question:—'In what Way can Healthy Working Men's Dwellings be erected in lieu of those removed for carrying out Sanitary or Municipal Improvements, or for other Purposes?' papers were read by Mr. Bailie Morrison, Glasgow Improvement Trusts, and by the Rev. R. J. Simpson; and a long and instructive discussion ensued, in which the Lord Provost, the Right Hon. Lyon Playfair, Dr. Gairdner, and many other gentlemen of large and varied experience took part, and, on the motion of Mr. Edwin Chadwick, it was unanimously resolved by a meeting of fully 150 members:—

'That the thanks of the Health Department be given to the Corporation of Glasgow, for the important example they have set in sanitation for the benefit of other cities, by the proceedings they have taken for the removal of irretrievably unhealthy dwellings, and the reconstruction of healthy dwellings for the wage classes of the population.'

In addition to the papers on the special questions, a large number

of voluntary contributions occupied the attention of the department; among others, were papers 'On the Pollution of Rivers; 'The Cleansing of Sewage;' 'On Disinfection;' 'On Infant Mortality, and the Means for Decreasing it;' 'On the Shortcomings of the Public Health (Scotland) Act, 1867, and the Amendments required;' 'On Water Analysis,' and a long and most interesting paper, 'On the Health of American Cities,' contributed by Dr. Elisha Harris, Registrar of Vital Statistics, New York. It was unanimously resolved:—

'That the General Secretary of the Association be requested to communicate to Dr Harris the best thanks of the Health Department for his most valuable paper.'

ECONOMY AND TRADE DEPARTMENT.

The business in this department was opened by the consideration of the special question:—'As to the Means of meeting the Increased Competition arising from the Spread of Manufacturing Industry in Europe? the subject being introduced by papers by Mr. J. Matheson, Jun., and Mr. Isaac J. Murphy. It appeared to be the general opinion that the present condition of the country afforded no reasonable grounds for fearing the results of foreign competition. Several speakers repudiated the notion, supported by so many, that the tendency of trades unionism was to play into the hands of foreign competitors. Various suggestions were made as to the best way of reconciling the interests of labour and capital, as well as for the development of the labouring and manufacturing power of the working classes; and on the former point the establishment of consultative councils, to arrange differences between employers and employed, was urged, while on the latter, the most generally accepted opinion pointed to the desirability of an extended system of technical education. The notion of removing labour from the country through the medium of emigration and kindred agencies was deprecated, as tending to impoverish the resources upon which national prosperity was mainly dependent.

On Friday an animated discussion took place upon the special question:—'What Legislation should follow upon the Report of the Friendly Societies' Commission?' Papers were read by Dr. Cameron, M.P., Hon. E. Lyulph Stanley, and Messrs. J. M. Ludlow and Potter. Several speakers supported the view that compulsory registration should be established, it being contended that this condition would operate as a restrictive test from which unsound societies would shrink. A general tribute was paid to the desire evinced by late and present Governments to deal with the question. The suggestion that a Government certificate should imply soundness and solvency in all cases where it was given was discussed, but did not meet with favour, the opinion being that the State should insist merely upon a compliance with certain formal legal obligations, leaving the members of friendly societies to take care of themselves in other respects.

The last special question:—'As to the best Means of drawing together the Interests of the United Kingdom, India, and the Colonies,'

was opened by a paper, directed more especially to the Colonial branch of the subject, and written by the late Dr. Eddy, whose lamented decease, after writing and before reading his paper, was alluded to in feeling terms by the President of the department, and several of the leading members, and followed by another from Mr. Edwin Chadwick, C.B. Mr. Chadwick deprecated the apparent tendency of the colonial policy of the Government to wean the colonies from the mother-country, and maintained that, on economical grounds, union between the various portions of the Empire should be fostered. In the other paper the impossibility of at present constituting a legislative union of the Empire was admitted, while it was contended that something in the nature of a federal union, presided over by a federal council, might be practicable. This limited suggestion was supported by a comparison with the failures and successes of other nations in the same direction. In the discussion that followed, the Indian Council was suggested as in some sense a model for what was desirable for the Colonies generally, but objected to, on the ground that merely consultative powers were inadequate to the requirements of such a body. Other parties enlarged upon the moral and social benefits to be secured by a vigorous interchange of thought and opinion between the mother country and its dependencies. Mr. Chadwick's paper was referred to the Council of the Association, with a suggestion that action should be taken upon some of its recommendations. A variety of voluntary papers, including some upon 'Charity and Mendicity,' 'The Dwellings of the Working Classes,' 'Trades Unions of Scotland,' 'Liquor Traffic,' and several branches of domestic economy were read.

The Council, in conclusion, have to report that they have accepted the invitation of the Mayor and Corporation of the town of Brighton to hold the Congress in that town in 1875, and have also accepted an invitation from the Mayor and Corporation of the town of Liverpool to hold the congress there in the year 1876.

APPENDIX B.

Statement of Economic Principles of Public and Private Telegraphic Establishments.

(Extract from a Paper by Sir James Anderson, Manager of the Eastern Telegraph Company, read before the Statistical Society, June 18, 1872.)

1. The unavoidable accompaniments to private and joint-stock enterprise produce a series of obstacles to cheapness and progress that only Government control can overcome.

2. It is this commercial activity which every State should encourage, as certain to add to the general prosperity and wealth-producing power of a nation; and bearing in mind the principle established, that the increase of internal telegrams at a low tariff is enormous, and increase of deficit of net product only slight, with a tendency to diminish, I would submit to the Telegraph Department of India whether it might not be worth while to try a bold effort to introduce telegraphy into the habits of the Indian community.

I am of opinion this will never be done unless its tariff is reduced to some moderate standard represented by some small current coin, such as half a rupee. The lines exist; the capital is expended; the stations are opened; the work can be greatly increased without material addition to the expenditure. There is no danger of competition upon any section which may prove exceptionally productive, such as all private companies must always apprehend. It is more than probable that the indirect gain to the State will far more than compensate for the direct loss. Besides, as internal telegraphy grows, international telegraphy must also increase (although not in the same proportion), and it is certain that upon every international telegram there is a large profit to the State to compensate for the loss upon the internal telegrams; and this profit is all the greater, as the cost of working each telegram is diminished by an increase in the number of internal messages.

3. I regret that I cannot think of any reason which should influence the directors of private companies to reduce their tariffs beyond the single one of expediency.

The foregoing pages prove conclusively, 'That every reduction of tariff led to diminution of the net product.'

It may be expedient to reduce tariff with the object of preventing opposition and satisfying a popular demand, but this is sufficiently questionable, for the following reason:—A reduction of tariff means a sacri-

fice of revenue for a length of time; and after this sacrifice has been made, and is about to be rewarded by the gradual increase of revenue to the original point, there will be others ready to bring out rival cables upon the first publication of favourable receipts.

There is the danger, already referred to, that when one company shall have made unproductive lines, they may be opposed upon the most productive sections by a new company with smaller capital.

I venture to say that these are points which never leave the minds of directors of private telegraph companies.

The increase of inland traffic decreases the cost of working both internal and international telegrams. Private companies obtain no benefit from this; governments obtain all the benefit. It is established that lowering the tariff upon international messages diminishes the revenue directly derived from this class of correspondence, but it increases the traffic; and it is certain that the increase of international traffic largely augments the increase of internal correspondence, both by telegraph and post office.

Governments obtain all the benefit from this cause; private companies cannot obtain any benefit whatever. All the increase of telegraphy directly and certainly stimulates commercial activity, increases the wealth of a nation by multiplying transactions, enlarging incomes, thereby promoting a larger taxable surface for the benefit of the whole community and the amusement of the Chancellor of the Exchequer. Private companies can only obtain a minimum of advantage from the first effect, and none at all from the latter. Government and the State are immediately benefited.

Governments can, by unity of management, by simplicity of thorough working, by uniformity of system, effect an enormous amount of saving that cannot be approached under the system of private management.

Governments can, by absence of competition, extend the system to such points as the Mauritius, Cape of Good Hope, New Zealand, the Andamans, Burmah, &c., &c., which, although comparatively unproductive, would yet, to a government with a monopoly, become feeders to an extent which in the aggregate would be at least self-supporting. No private company can afford this luxury.

It follows, then, that Governments have every advantage in their favour, every possible reason in the interest of good government and substantial benefit to the State, to reduce all telegraphy to the point of being simply a self-supporting system, not a dividend-paying system, which it is the duty of private companies to maintain as long as possible.

There is one question in the minds of those who are not familiar with the subject which can easily be answered. What would become of all the property in time of war? My answer to that is, there is sufficient enlightenment amongst all nations to arrange conditions to control or suspend one or more cables or land telegraphs during the operations of war without resort to the barbarism of destroying them; this was done during the civil war in America, and the telegraph remained intact to become the messenger of peace.

APPENDIX C.

Address of the Lord Provost on the opening of the Sanitary and Educational Exhibition.

THE LORD PROVOST said—We open to-day the eighteenth session of the Social Science Congress, which, I am glad to say, is to be held in this city. The first part of the proceedings of the day, as has been arranged, is to inaugurate this sanitary and educational exhibition, which, I trust, will be neither the least interesting nor useful of its departments. If anyone complains that the business of the Congress is not sufficiently practical, and that they have nothing of a tangible nature, I think they must be convinced that they have here objects which they can touch and handle, and which are of great importance. At first sight some may be inclined to ask, What is meant by a sanitary and educational exhibition? I may say that it includes the exhibition of whatever can minister to the health, comfort, and education of society, thus embracing a very wide range, the particulars of which are given in the programme of the Congress. Everything relating to ventilation and drainage, heating and lighting, cleansing and cooking, food and clothing, furniture and educational appliances, and whatever articles are calculated to lighten the labour and promote the convenience of domestic life, come fairly under the head of a sanitary exhibition. To show to the public the latest appliances for promoting these is the design of this exhibition. We are justly proud of the rapid strides which our country has made within the last thirty years in mechanical science, and in speaking of this are ever apt to refer to our railways, our steam vessels, and our electric telegraphs; but it must be remembered that great as these have been, it is not by them alone we have advanced to our present state of prosperity. Invention has found its way into every department of our agriculture, our manufactures, our mining, our shipping, and our other varied industries. I am no friend to the Darwinian theory, which would trace our parentage to the monkey, for I believe that all things continue as they were from the beginning of the creation, but we have in the discoveries referred to, a development of the human mind calculated to inspire wonder and amazement. In tracing the history of the past, we find the spinning-wheel transformed into the spinning-jenny, the common hand-loom into the powerful steam-loom, the simple lever into the hydraulic press and steam-hammer, the pot quern for grinding corn into the steam corn grinding mill, the pump well giving place to pipes from the reservoirs of the gravitation water companies, the tallow candle and the oil lamp to the splendour of the gaslight, and the work of the hand-sewing needle with its 'stitch,'

stitch,' to the sewing-machine. These are but a few of the many changes which are occurring daily, and it would be easy to refer to vast improvements in locomotion, in shipbuilding, in our electric cables, in our letterpress printing, and various other arts; but this is unnecessary. Although much has been done in regard to sanitary appliances, there is ample room for further progress. Thousands of our population are daily becoming the victims of disease and death from inhaling the poisoned air of damp and unwholesome houses. This is particularly the case in large towns, where the population is huddled together in dense masses and in old buildings without ventilation and with imperfect drainage. The effect produced tells alike on the moral and physical condition, thus leading to intemperance, immorality, and disease. It is only within the last few years that the public have become fully alive to this, and I have no hesitation in saying that the meetings of the Social Science Congress have greatly contributed to such publicity. Intimately connected with this is the disposal of the refuse and sewage of towns and the purification of rivers, a subject which is now receiving a large amount of consideration. The subject of ventilation, so little attended to until of late, is now one of the important questions of the day, and efforts are being made to procure the best appliances for securing it. A great revolution has of late taken place in our system of drainage by the substitution of glazed earthenware pipes for the built drain; and in proportion as this is extended, so may we expect beneficial results to follow. The ruinous consequences which have frequently ensued from the impure gases of unenclosed drains in our public hospitals must be known to everyone. Very considerable improvements have been made in the various kinds of plumber work, but here there is still room for further improvement, so as to lighten the expense and secure the work from so often going wrong. Another deleterious element to health and comfort is the emission of smoke, the prevention of which I regret to say, is too little attended to, and the apparatus which can be most effectually and economically applied for this purpose deserves the highest encouragement. The use of the bath, particularly among our working population, is too much neglected. A large number of our people are not fully alive to its beneficial effects on the health and spirits in this depressing climate. We would do well to imitate the ancient Greeks and Romans in this respect, for they knew and felt by experience its great advantages. Much may be done to educate the people to its use, and if this could be accomplished it would tend greatly to improve their habits. I cannot go into the detail of the various articles here exhibited, many of them of a highly useful and important character, but these will recommend themselves to all present; and I trust that this exhibition, forming the third which has taken place in connection with the Congress, will be at least as successful, or I may rather say more successful than those which have preceded it. I now declare this exhibition opened.

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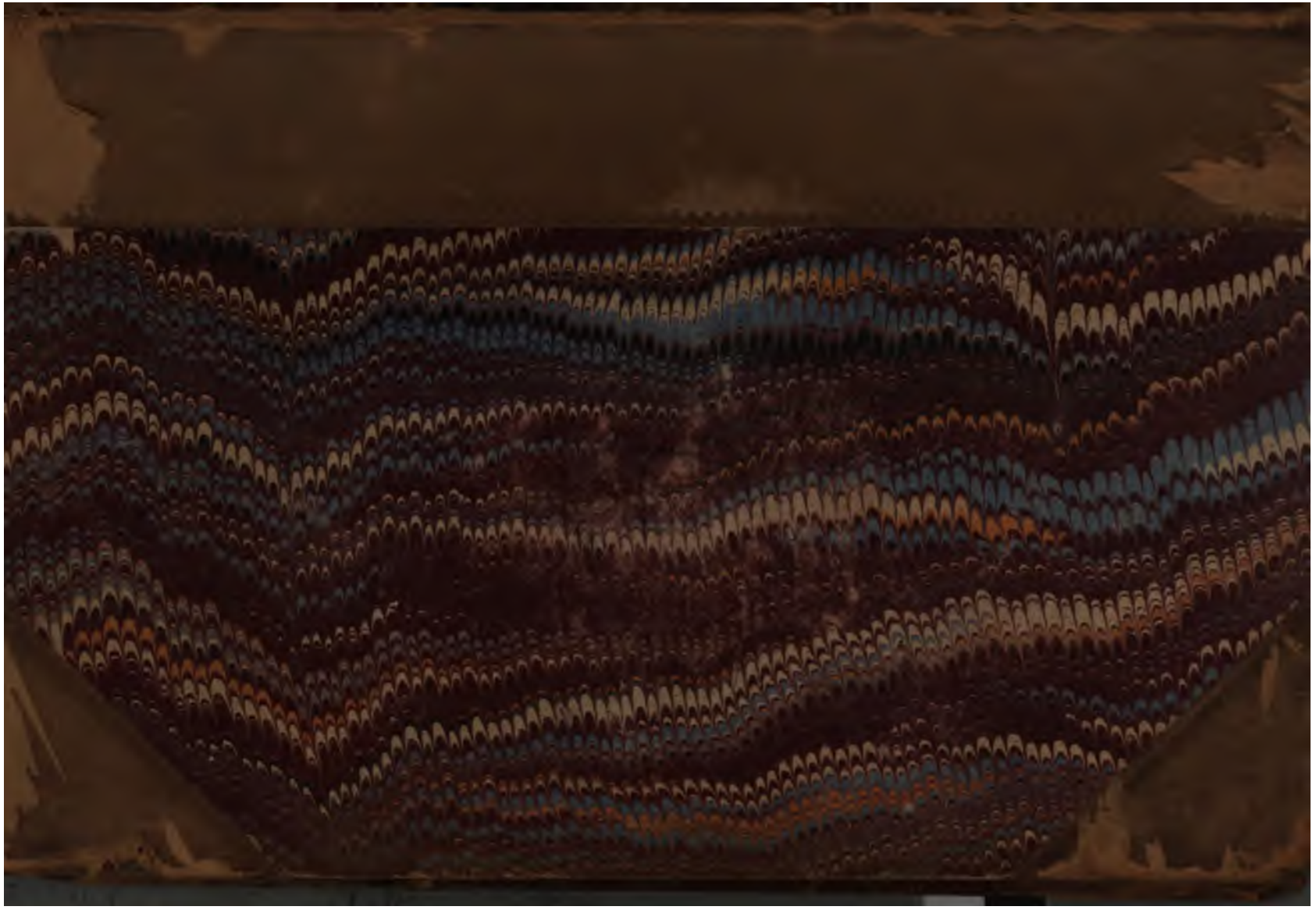
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